

THE CBW CONVENTIONS BULLETIN

News, Background and Comment on Chemical and Biological Weapons Issues

ISSUE NO. 82

MARCH 2009

Quarterly Journal of the Harvard Sussex Program on Chemical and Biological Weapons

As the OPCW moves closer to its post-2012 transition, here is the second in a new series of articles about industry-CWC relationships:

THE CHEMICAL WEAPONS CONVENTION AND THE ROLE OF THE CHEMICALS INDUSTRY IN ITS FUTURE

Tony Bastock ¹

I must make clear at the very outset that these are my own views and that I do not presume to be speaking for the Chemicals Industry as a whole. However, given my position as Chair of the UK National Authority Advisory Committee (NAAC) for the past four years and my other industry roles, I do believe I am close to industrial and trade association opinion. Just prior to writing, I have been accepted to serve a further four-year term as Chair of NAAC, so I am now in a position to look forward into a future for the CWC and its industrial support, on which I may have some slight influence.

The Chemicals Industry and the CWC up to the present time

The support of industry for the CWC has been critical to the great success of this treaty over the past eleven years; however, during this time and before, the reputation of the Chemicals Industry has clearly been failing. From 1979 to 2008, its favourable acceptance by the general public in the UK had fallen from nearly 50% positive to only 24% positive, and there had been a large increase in the percentage of the population who were uncommitted (figure 1²). The positive image of chemical products is lower in the UK than in any other European country except Italy, and of the major chemical economies only Germany (figure 2³) really shows an acceptable level of public approval. An extensive multimedia publicity campaign by the German-based company BASF may have been responsible for these reputation dividends. The more concerning statistics are the proportion of those undecided, who, with adverse publicity about possible future chemical incidents that might include potential chemical-warfare agents or their precursors, could easily be pushed onto the negative side.

This failing reputation and public mistrust of the Industry, together with the perception that the Industry is opaque and uncommunicative, has certainly led to onerous and costly legislation, of which the new EU-mandated Regulation on Registration, Evaluation, Authorisation of Chemicals (REACH) is the prime example.

Fig.1² Favourability to the chemical industry general public - trends

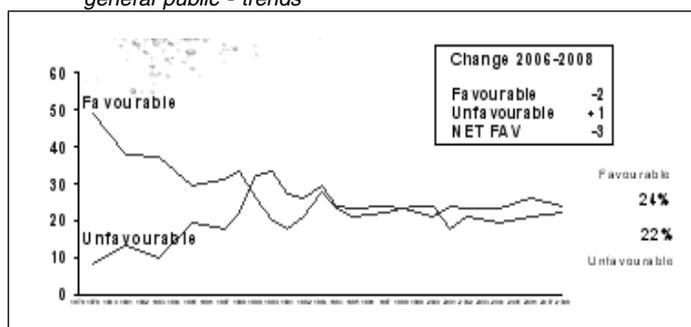
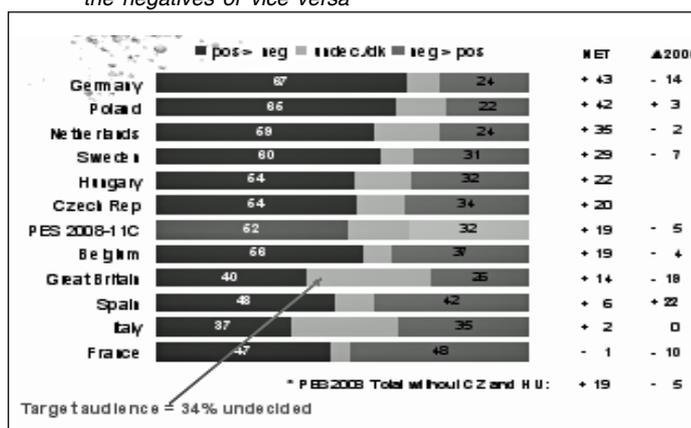


Fig.2³ Overall image of chemical products - PES 2008 ... whether their positive effects for our society outweigh the negatives or vice versa



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The Industry has failed to embrace and broadcast its successes, of which support for and compliance with the CWC is a notable example. The Industry must learn to improve communication, if the impact is to be limited of further legislation that will damage competitiveness and impede its licence to operate.

The Chemicals Industry and the CWC in the future

An increase in public awareness of the CWC and recognition of the support for and compliance of industry with the CWC must be a future priority for the Industry, and for national authorities and the OPCW. Some limited work has been started in the UK by the NAAC, and this has to be taken further. An exhibition and film project is being developed by the UK Foreign and Commonwealth Office to be shown in science discovery centres, the first being Catalyst Science Discovery Centre and Museum, in Widnes, in the heart of the UK chemicals industry, but this project is moving slowly. Attempts to bring awareness of the CWC to universities, to students and their teachers, through seminars and workshops, have proved the most disappointing, and have had to be delayed through lack of interest.

There are some worrying misconceptions within industry and trade bodies that the CWC ends with the destruction of the last weapon and, within many universities, that production of chemical agents can only be a state-sponsored operation. Therefore, in the interests of national and international security, it is vital that awareness of the CWC should be improved, and that the treaty itself should remain in force, as long as the means of production remain intact, and the potential exists, within university and other laboratories and pilot-plants, for the small-scale production of these agents aimed at acts of terrorism.

The CWC is an issue of reputation for the Chemicals Industry. If Industry can demonstrate and broadcast its compliance, cooperation and desire for transparency – especially in its acceptance of inspection – it can, in collaboration with national authorities and OPCW, build public trust and enhance its image.

The inspection process

The selection of companies to be inspected and the process of that inspection have generated extensive debate. I hope I can offer first hand knowledge, from an industry viewpoint, of the process of inspection, as I am a director of two companies that have been inspected: Contract Chemicals Ltd (CCL), a schedule 2 plant, involved in amine and halogen chemistry and Robinson Brothers Ltd (RBL), an OCPF plant involved in sulphur chemicals.

Both inspections placed burdens on the companies which were outside normal operations, both required the presence of key staff normally fully occupied in other areas, and both had a monetary cost to the companies (figure 3⁴).

However, the burden was not too onerous and the costs were acceptable. The company and staff certainly learned some lessons (figure 4⁴).

Further, the whole process allowed the companies to demonstrate to local communities, through our residents committees, that they had successfully undergone international inspection.

Fig.3⁴

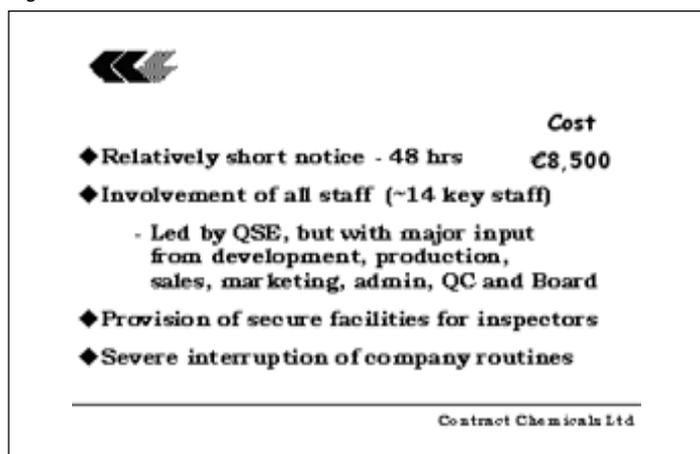
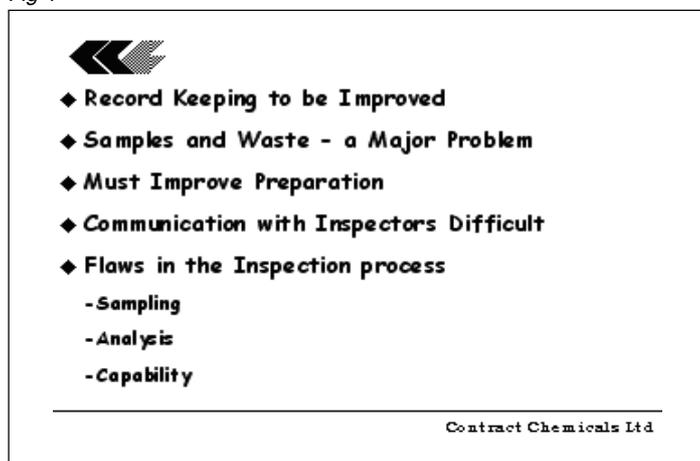


Fig 4⁴



Flaws in the inspection process

Companies such as CCL and RBL are familiar and comfortable with the inspection process, since their markets are mainly life-science industries, where customers demand exceedingly high standards of production performance, which has to be thoroughly documented. Samples are often taken and analysis performed. Therefore, company personnel were surprised when this did not happen during a CWC inspection and this was commented on as a flaw in the inspection process.

There is, of course, provision in the CWC for these activities, and the addition of sampling and analysis processes to the inspection routines has been addressed. There seems to have been some opposition from certain parts of the Industry to these processes forming part of the inspection, apparently on the grounds of confidentiality.

This opposition is typical of yesterday's Chemicals Industry approach. An industry initiative of about 10 years ago branded "Confidence in Chemicals" and set up to inspire just that, was rather ridiculed by a senior UK politician who commented that it made a change from the usual Chemicals Industry approach of "Chemicals in Confidence"! A clear message on

how the Industry is sometimes viewed at high political levels.

The issue of “capability” is one that should be considered most thoroughly. Both CCL and RBL, in common with most fine and speciality chemical companies and some universities, have pilot plants that can operate safely on a multitude of processes. These are often not regulated under normal legislation, as they are considered of too small a capacity to pose a threat that should concern the UK Health and Safety Executive. However, these plants could produce small amounts of schedule 1 or 2 materials and as such, they should be open to inspection, if only to make management vigilant in monitoring their operation.

In conclusion, I believe the Chemicals Industry must embrace transparency and continue to offer the widest cooperation to the OPCW. It must promote awareness of the successes of the CWC, and of the threat of chemical weapons, through trade associations, through contacts with centres of learning, primary to tertiary, and through dialogue with the media; and it must openly demonstrate the great contribution it is making to controlling the threat. These actions may then help to restore public trust and a battered reputation.

Notes

¹ Tony Bastock is Group Managing director of Contract Chemicals Ltd, a schedule 2 plant and Non-Executive Director of Robinson Brothers Ltd, an OCPF plant.

He is Chair of the UK National Authority Advisory Committee, Chair of the Assembly of Business Members, the smaller companies in CEFIC membership (defined as those with a turnover of less than 1 billion euros – over 500 companies), Vice-President, member of the Executive Committee and Board of The European Chemical Industry Council (CEFIC), member-elect of the Board of the International Council of Chemical Associations (ICCA) and Past President and member of the Executive Committee and Council of the UK Chemical Industries Association (CIA).

He is an industrial chemist with a PhD in organofluorine chemistry and in 1998 the British Crown awarded him an OBE for services to the Chemicals Industry.

² Source: Mori Polls commissioned by Chemical Industries Association

³ Source: CEFIC sponsored research

⁴ Contract Chemicals Ltd internal cost calculation

News Chronology

August - October 2008

What follows is taken from issue 82 of the Harvard Sussex Program CBW Chronicle, which provides a fuller coverage of events during the period under report here, and also identifies the sources of information used for each record. All such sources are held in the Sussex Harvard Information Bank, which is open to visitors by prior arrangement. For access to the Chronicle, or to the electronic CBW Events Database compiled from it, please apply to HSP Sussex.

August From Nairobi, Kenya, the United Nations Environment Programme releases *Green Customs Guide to Multilateral Environmental Agreements*, which provides information and guidance to customs officials on the Green Customs Initiative. The objective of the Initiative is to enhance the capacity of customs involved in identifying illegal trade in environmentally sensitive commodities such as ozone depleting substances, toxic chemicals, hazardous waste, endangered species and living modified-organisms. Amongst other things, the Guide provides an overview of the relevant treaties, such as the CWC, as well as relevant organizations. It is designed to be used as part of a training curriculum for customs officers or as a stand-alone resource.

1 August In Syria, General Mohammed Suleiman is shot dead on a beach near the city of Tartous. According to the Institute for National Security Studies, unidentified US intelligence sources have previously tied Suleiman to transfers of chemical weapons from Iraq to Syria in 2003 [see 21 Jul] immediately prior to the US-led invasion of Iraq [see 20 Mar 03]. The Institute, which is based in Tel Aviv, Israel, describes itself as “non-partisan, independent, and autonomous in its fields of research and expressed opinions”.

2 August In Alabama, the Anniston chemdemil facility commences the destruction of its stockpile of VX-filled M23 land mines. The landmines are now the last of the VX munitions the facility has to destroy, after previously destroying its stockpile of VX-filled artillery shells [see 24 May]. Following the destruction of the land mines, the facility will undergo a changeover period prior to beginning the incineration of

munitions containing mustard gas. Spokesman for the facility Mike Abrams says that to date the facility has destroyed 317,671 weapons, which represents more than 48 per cent of its entire stockpile.

3 August In Kabul, Aina TV quotes an unnamed Afghan senator as saying: “Over the past around three to four years, about 20,000 innocent Afghans have been killed and martyred in the province ranging from Herat to Nurestan by American bombardments, cruise missiles and chemical weapons, and by the British Marine’s combat helicopters, but the Defence Ministry has kept this secret.” The comment is made during a hearing of the Senate on security-related issues. Attending the hearing on behalf of the government is Chief of the National Security Directorate Amrollah Saleh.

5 August In Nagano, Japan, the eighth victim of the sarin attack by Aum Shinrikyo on the city of Matsumoto [see 28 Jun 94] dies. Kyodo news agency quotes Sumiko Kono’s husband, Yoshiyuki Kono, as saying that she died of respiratory failure resulting from the after effects of the attack. The agent, he says, had initially sent her into cardiac arrest and caused significant brain damage, forcing her into a coma for the rest of her life. The Japanese authorities had previously identified her husband as a suspect in the attack, though he was later cleared.

5 August The US Administration ignored UK intelligence indicating that Iraq did not possess weapons of mass destruction, according to a newly published book by Pulitzer Prize-winning journalist Ron Suskind. In *The Way of*

the World, published by Simon & Schuster, Suskind says that in early 2003 top Iraqi intelligence officer Tahir Jalil Habbush informed MI6 (UK Secret Intelligence Service) agent Michael Shipster that Iraq had ended its nuclear and chemical weapons programme in 1991, and had shuttered its biological weapons activities in 1996. In the book, former UK intelligence chief Richard Dearlove says the intelligence-gathering trip was a late “attempt to try, as it were, I’d say, to diffuse the whole situation”. He continues: “The problem was the [Vice President Dick] Cheney crowd was in too much of a hurry, really. [President George W.] Bush never resisted them quite strongly enough.” According to Suskind, in February 2003, Dearlove personally provided the then Director of US Central Intelligence George Tenet with the report from Shipster’s meeting with Habbush. “The White House then buried the Habbush report. They instructed the British that they were no longer interested in keeping the channel open,” says Suskind. The Associated Press quotes Tenet, from a statement distributed by the White House, as saying: “As Mr Suskind tells it, the White House directed (and CIA allegedly went along with) burying that information so that the war could go ahead as planned. This is a complete fabrication. In fact, the source in question failed to persuade his British interlocutors that he had anything new to offer by way of intelligence, concessions, or negotiations with regard to the Iraq crisis and the British on their own elected to break off contact with him... There were many Iraqi officials who said both publicly and privately that Iraq had no WMD but our foreign intelligence colleagues and we assessed that these individuals were parroting the Baath party line and trying to delay any coalition attack... The particular source that Suskind cites offered no evidence to back up his assertion and acted in an evasive and unconvincing manner.”

6 August In Washington, DC, at a news conference called by the US Department of Justice, some particulars of the case against the now-deceased ‘anthrax letters’ suspect, Dr Bruce Ivins [see 29 Jul], are set out by the US Attorney for the District of Columbia, Jeffrey Taylor; by the FBI Assistant Director in charge of the Washington Field Office, Joseph Persichini; and by Alexander Lazaroff, Chief of the US Postal Inspection Service. In his opening statement, Taylor says: “Based upon the totality of the evidence we had gathered against him, we are confident that Dr Ivins was the only person responsible for these attacks. We are now beginning the process of concluding this investigation. Once this process is complete, we will formally close the case.” He cautions, however, that it will not be possible to discuss some aspects of the case today

The main particulars disclosed are as contained in 66 newly unsealed court documents in the case, all being applications for search warrants during 2007 and 2008 plus associated papers, some 470 pages in all, now posted on the Justice Department website. The searches sought were of the home, cars, safety-deposit box, workplace lockers and laboratory areas used by Dr Ivins, as well as various e-mail accounts understood to be his and a computer he had used at a public library in Frederick shortly before his death. The key paper, reiterated in at least 13 of the others, is a 21-page affidavit sworn on 31 October 2007 for the purpose of justifying the searches sought, and thereby, in effect, constituting a summary of the case.

Thus related, the case had been constructed from six main strands of evidence, the most striking of which is summarized in the affidavit as follows: “At the time of the attacks [Dr Ivins] was the custodian of a large flask of highly purified anthrax spores that possess certain genetic mutations identical to the anthrax used in the attacks”. The news conference is told

about all six strands of evidence. In addition to the genetic testing, these include circumstantial evidence from more traditional forms of detective work.

The genetic tracing of the anthrax spores used in the original attacks – spores of the Ames strain of *Bacillus anthracis* – to a single flask of spores first grown in 1997, labelled “RMR-1029” and held at the US Army Medical Research Institute of Infectious Diseases (USAMRIID), had been done by early 2005, using a method of ‘DNA fingerprinting’ that FBI scientists had been developing for the purpose over a period of years in conjunction with “the best experts in the scientific community”. US Attorney Taylor describes the results obtained as “the key breakthrough” in the investigation. He states that validation of the method “didn’t take place until 2007” but neither he nor FBI Assistant Director Persichini provides additional description or explanation of what seems to be a major advance in microbial forensics.

Asked to speculate about motive, Taylor speaks of “the troubled nature of Dr Ivins” and of “his concern about the end of the vaccination program” – this being a reference to the suspension [see 13 Dec 99 and 10 Nov 00] by the Food and Drug Administration of further manufacture of the AVA anthrax vaccine heavily used by the Defense Department in its force-wide Anthrax Vaccine Immunization Program [see 29 Apr 99]; Dr Ivins had been a part of the USAMRIID team working with the manufacturers (BioPort of Michigan, now Emergent BioSolutions) to improve the vaccine. Taylor says: “one theory is that by launching these attacks, he creates a situation, a scenario, where people all of a sudden realize the need to have this vaccine”.

Twice Taylor expresses confidence that, had the case gone to trial, Dr Ivins would have been found guilty beyond a reasonable doubt. This assertion is later rejected by the law firm that has been representing Dr Ivins, Venable LLP. In a statement it issues about the news conference, two of its attorneys write: “What the public demanded today was concrete evidence. Instead, it was deluged with everything but. The government released search warrants – investigative tools designed to discover evidence, not to serve as evidence and treated these warrants as smoking guns. The government’s press conference was an orchestrated dance of carefully worded statements, heaps of innuendo and a staggering lack of real evidence – all contorted to create the illusion of guilt by Dr. Ivins. The government would have the American people believe that after seven years and more than \$15 million of taxpayer money, they have found the individual responsible for the heinous attacks of the fall of 2001. Nothing could be farther from the truth.”

Speaking to reporters, attorney Paul Kemp of Venable’s states that what the government had disclosed “was an explanation of why Bruce Ivins was a suspect, but there’s a total absence of proof that he committed this crime”. This assessment is rather widely reflected in subsequent press-reporting and commentary. Much quoted is Kemp’s comment on the impressive evidence relating to flask RMR-1029: “In this country we prosecute people, not beakers”.

6 August In Oregon, the Umatilla chemdemil facility destroys the last of its 3,752 VX-filled 8-inch artillery projectiles, having commenced the process three weeks previously [see also 13 May].

Seven weeks later, the facility commences the destruction of its VX-filled land mines, which are the last VX munitions in its stockpile. The Associated Press quotes “officials” at the facility as saying destruction of the land mines is expected to take two months, after which there will be a five-month period during which it will prepare to destroy its stockpile of HD

mustard blister agent stored in bulk containers, which will be the third and final type of agent to be destroyed at Umatilla. That process, the officials say, is expected to take one to two years. [See also 2 Aug]

7 August In the UK, Ian Kenyon, the former Executive Secretary of the Preparatory Commission for OPCW, dies, aged 68, after losing a battle against cancer.

7 August In Las Vegas, Roger Bergendorff, who was arrested after ricin was discovered in his motel room, pleads guilty in a federal court to two charges, including possessing a biological toxin [see 29 Feb]. The Associated Press reports that as part of the plea bargain, Bergendorff's defence team have agreed that he should receive a sentence of 3 years and 1 month imprisonment. The maximum sentence for the offences is 10 years imprisonment and a \$250,000 fine.

Two days later, Bergendorff says he extracted the ricin in 1998 from the beans of a castor plant in his garden, and then carried it around with him for the next ten years. Speaking to the Associated Press from his prison cell in Las Vegas, he denies any criminal intent and says he never intentionally or accidentally released any of the lethal powder. "Absolutely not. Zero chance. I had it triple-sealed", he says. Bergendorff blames stress following the death of his older brother as having necessitated his calling an ambulance to his motel room, and this subsequently led to the discovery of the ricin. "It was in a container in my safe and it hadn't been touched. There was no reason to touch it," he says.

Four days later, in Salt Lake City, Bergendorff's cousin, Thomas Tholen, pleads guilty in a federal court to the felony of failing to inform authorities that Bergendorff had produced a supply of ricin. The Associated Press reports that in exchange for Tholen's guilty plea, the Prosecution has recommended a sentence of three years probation.

Ten weeks later, Tholen is sentenced to two years probation and fined \$500.

Fourteen weeks later, Bergendorff is sentenced by a federal court in Las Vegas to 42 months imprisonment, which is five months more than that requested by the Prosecution. Passing the sentence, District Judge Robert Jones says: "You not only proved a material threat to yourself, you proved a material threat to everyone around you when you possessed this stuff." Bergendorff also receives a \$7,500 fine, the purpose of which is to provide him with the incentive to participate in a work-release programme. Bergendorff tells the court that for years he had struggled with drugs and alcohol, failed relationships and family deaths. "I felt this was a harmless outlet for my anger, a potential shield... I could not have used it even if I wanted to, because I fear God's judgment... I'm not a religious zealot, a killer, a nut or a terrorist," he says.

8 August In Ukraine, the former security chief of Viktor Yushchenko dismisses recent statement made by parliamentarian Davyd Zhvaniya that Yushchenko was not poisoned by dioxin [see 31 May]. Speaking during an interview with *Ukrayinska Pravda*, Yevhen Chervonenko says that on 5 September 2004, the alleged night of Yushchenko's poisoning, he received an order from Yushchenko to withdraw security shortly before leaving to have dinner at the house of then parliamentarian and member of the Ukrainian secret service Vladimir Satsyuk [see 20 Dec 04]. Chervonenko then gives a detailed description of the extremely poor state of Yushchenko's health the following morning, including the fact that he "was already unable to step down from the second floor of his flat". Amongst other things, Chervonenko says that two days later – after Yushchenko's condition had deteriorated still further – Zhvaniya opposed a decision taken

by other members of Yushchenko's inner circle to send Yushchenko abroad for treatment, on the grounds that it would damage the election campaign.

8 August The US Army Department announces the establishment of a special team to review its security measures at Fort Detrick following the identification by the FBI of USAMRIID microbiologist Bruce Ivins as 'anthrax letters' suspect [see 6 Aug]. Later, both the Navy and the Air Force announce a suspension of work in their biodefence laboratories so as to allow thorough reviews of safety procedures.

8 August In the USA, two days after announcing that Dr Bruce Ivins was the only person responsible for the anthrax letters attacks [see 6 Aug], Attorney for the District of Columbia Jeffrey Taylor sends a letter to Steven J Hatfill's lawyer, stating that Hatfill is no longer suspected of having been involved in the attacks. Two months previously, the Department of Justice agreed to pay \$5.85 million to resolve the lawsuit brought by Hatfill relating to violations of his privacy rights. However, it refused to admit any wrongdoing or to offer an apology to Hatfill, later arguing that to do so could have alerted Ivins to the fact that he was being investigated [see 27 Jun]. In his letter to Hatfill's lawyer Thomas G Connolly, Taylor writes: "We have concluded, based on lab access records, witness accounts, and other information, that Dr Hatfill did not have access to the particular anthrax used in the attacks, and that he was not involved in the anthrax mailings." Taylor says that forensic techniques that allowed government scientists to genetically match the anthrax used in the bioterror attacks with a batch kept in Ivins' custody did not exist in 2002, when agents searched Hatfill's house. Responding to a question during the press conference two days previously, the head of the Federal Bureau of Investigations Washington office, Joseph Persichini, refused to mention Hatfill by name and avoided explicitly clearing him. "With respect to the other individual you mentioned we were able to determine that at no time could that individual be put in the presence of that flask from which these spores came," said Persichini. *The New York Times*, however, quotes "a person close to the case who spoke on condition of anonymity" as saying that Hatfill's lawyers were said to be unsatisfied and pressed the department for an explicit exoneration. Hatfill is currently appealing the dismissal of his claim for libel brought against *The New York Times* and its columnist Nicholas D. Kristof for having identified him as a suspect in the case [see 14 Jul].

8 August In Indiana, the Newport chemdemil facility destroys its last ton container of VX, and with it completes the destruction of its entire stockpile of chemical weapons. Newport, which started the destruction of its stockpile three years previously [see 5 May 05], is now the third US facility to complete its destruction operations, following Johnston Atoll [see 4 Aug 03] and Aberdeen Proving Ground [see 12 Mar 07]. The facility neutralized its stockpile of VX by combining it with heated sodium hydroxide and water in a reactor, which resulted in the production of caustic wastewater. The waste product was then transported to Veolia Environmental Services in Port Arthur, Texas, for final disposal. The transportation of the waste is the subject of a court case being brought by a number of organizations which claim that the procedure is unsafe and should be stopped. According to the Chemical Materials Agency, the final batch of caustic wastewater will be transported to Veolia and destroyed within the next few weeks. Over the next 18-24 months the buildings and equipment and the facility will be dismantled and various waste products related to the destruction project will be disposed of.

11 August In Welikanda, Sri Lanka, the former leader of the Tamil Tigers (LTTE) in the Eastern Province, and the current leader of the political party TMVP, says that the LTTE has chemical weapons, though he does not know the exact type. Speaking at a press conference, Vinayagamoorthy Muralitharan – who is also known as Karuna Amman – says the leader of the LTTE, Velupillai Prabhakaran, would without doubt elect to use the weapons as a measure of last resort so as to avoid defeat. He says that it is now only a matter of time before the LTTE is defeated as it no longer has an effective commander and that as a result of his having left them they have now lost 60 per cent of their strength. Speaking about the LTTE campaign more generally, Amman says: “Though Prabhakaran continues to claim that military powers was his during the last 25 years, it was I who led the LTTE forces to defeat the security forces’ offensives such as Jayasikuru, Elephant Pass battle, Kilinochchi battle etc.” [See also 12 Aug 07]

11 August In Nassau, Bahamas, US Deputy Assistant Secretary of State Kirsten D Madison and Bahamian Acting Prime Minister and Minister of Foreign Affairs T Brent Symonette sign a bilateral shipboarding agreement under the US-led Proliferation Security Initiative (PSI). It is the ninth such agreement signed by the USA. [See 19 May]

11 August In Washington DC, the National Biodefense Science Board (NBSB) convenes for a meeting in order, amongst other things, to approve a letter by the Chair of the NBSB warning against moving ahead with a plan to advise to the public on how to stockpile antibiotics against a bioterror attack, on the grounds that it could promote unsafe uses of the drugs. The letter – written by NBSB Chair Patricia Quinlisk to Secretary of Health and Human Services Michael O Leavitt and Assistant Secretary of Preparedness and Response William C Vanderwagen – states: “As we communicated to you in a letter following the June meeting [of the National Biodefense Science Board] [see 18 Jun], the Board expressed many concerns about personal stockpiling of antibiotics, particularly through ordinary prescriptions... The scientific and practical benefits of individual stockpiling of ordinary antibiotic prescriptions remain to be demonstrated. Data must be developed that will estimate what if any impact this will have to improve preparedness. There are already substantial scientific data to demonstrate risk, including antibiotic misuse, inappropriate dosing, adverse events and selection of resistance through misuse before an event. Additional quantification of these risks is needed... We are concerned that the Department is moving forward rapidly to implement individual stockpiling... We believe that this would be unwise before the science is adequately examined. Moreover, there is a high risk of providing a confusing message that does not have the endorsement of experts in public health, biodefense, and infectious disease, nor of the majority of medical practitioners. Our concerns and recommendations, as well as those of other experts have not yet been adequately addressed. We urge you not to move precipitously to promote home stockpiling before the scientific questions can be answered and to address the concerns of clinicians and the public health community.”

11 August In Manhattan, a Pakistani scientist who allegedly plotted to carry out a series of terrorist attacks using, amongst other things, chemical and biological weapons, appears before a federal court to face charges of attempted murder and assault. The judge, however, postpones the hearing

of Aafia Siddiqui so she can receive medical treatment for a gunshot wound. According to the federal complaint filed against her, Siddiqui was shot twice after she allegedly grabbed a US Army Warrant Officer’s gun and opened fire as a team of FBI agents, US Army officers and other personnel prepared to interrogate her the day after her arrest. According to the *New York Daily News*, Siddiqui – who attended the Massachusetts Institute of Technology as an undergraduate and earned her PhD in neuroscience at Brandeis University – was arrested by the Afghan police on 17 July, while allegedly planning a possible suicide bombing on US forces there. Her arrest followed a request on 26 May 2004 by Attorney-General John Ashcroft and FBI Director Robert Mueller for the public’s help in finding Siddiqui and six men suspected of links to al-Qaeda. The complaint against her says a search of her bag found, amongst other things, “documents describing the creation of explosives, chemical weapons and other weapons involving biological material and radiological agents”. Also found, according to ABC News, were a list of potential targets that included the Plum Island Animal Disease Center [see 17 Dec 07]. ABC quotes unidentified sources as saying that the US authorities are currently analysing samples of Siddique’s saliva, hair, and fingernails to determine whether she has been exposed to chemical, biological or radiological materials.

Two days later, Siddiqui’s lawyer Elizabeth Fink says that the evidence against Siddiqui “was planted” by the authorities to incriminate her. Meanwhile, ABC News reports that Siddiqui was also plotting to kill former Presidents Jimmy Carter and George Bush and to attack the White House.

Thirteen weeks later, a judge issues a court order which determines that Siddiqui is not mentally competent to stand trial. The court order refers to the conclusions reached by federal mental health examiners, who undertook a confidential forensic assessment of Siddiqui on 6 November. The following extract from the assessment is referred to in the order: “Ms. Siddiqui is not currently competent to proceed as a result of her mental disease, which renders her unable to understand the nature and consequences of the proceedings against her or to assist properly in her defense.” According to ABC News, there have been allegations that Siddiqui has been mistreated while in custody, whilst some human rights groups have alleged that she was detained for years overseas in various secret locations.

12 August In South Africa, the head of the International Traditional Medicine Research Council says that a police unit, known as the Scorpions, is filled with apartheid-era special branch operatives, which is why former head of Project Coast Wouter Basson [see 19 Nov 07] has not been investigated, so reports Talk Radio 702. Sam Kine makes his comments in the context of the ongoing nationwide public hearings that are being held to allow citizens to voice their opinions about proposed legislation to disband the unit. According to Kine, the unit is being run by the US and UK intelligence agencies.

13 August In New Zealand, ambulances and fire engines arrive at the office of Prime Minister Helen Clark after an envelope containing white powder is found. All staff in the building are evacuated, however, according to Radio Australia, none appear to suffer any ill effects.

13 August The US Government Accountability Office transmits to Congress *Military Base Realignment and Closures: Army is Developing Plans to Transfer Functions from Fort Monmouth, New Jersey, to Aberdeen Proving Ground, Maryland, but Challenges Remain*. The review is one in a series

of reviews undertaken by the GAO on the implementation of the recommendations of the Defense Base Closure and Realignment Commission [see 24 Aug 05]. The Commission recommended that the Department of Defense (DOD) close Fort Monmouth, New Jersey, and realign most of its technical functions to Aberdeen Proving Ground, Maryland, as one of 182 recommendations. The report discusses the status of the Army's planning efforts to transfer command, control, communications, computers, intelligence, surveillance, and reconnaissance systems to Aberdeen Proving Ground, implementation challenges associated with the transfer, and strategies in place to mitigate mission-disruption risks.

13 August The US National Research Council publishes the report by its Committee on Military and Intelligence Methodology for Emergent Neurophysiological and Cognitive/Neural Science Research in the next Two Decades, *Emerging Cognitive Neuroscience and Related Technologies*. The committee has been chaired by Dr Kit Green now of Wayne State University School of Medicine. The study was sponsored by the Defense Intelligence Agency and identifies several research areas that could be of interest to the intelligence community: neurophysiological advances in detecting and measuring indicators of psychological states and intentions of individuals, including deception; the development of drugs or technologies that can alter human physical or cognitive abilities; advances in real-time brain imaging; and breakthroughs in high-performance computing and neuronal modelling that could allow researchers to develop systems to mimic functions of the human brain. In its overview chapter, the report states: "In the future, as soldiers prepare for conflict, [the Department of Defense] may call on the neurophysiology community to assist in maintaining the warfighting superiority of the United States. Commanders will ask how they can make their troops learn faster. How can they increase the speed with which their soldiers process large amounts of information quickly and accurately? How can the neurosciences help soldiers to make the correct decision in the difficult environment of wartime operations? [...] Although conflict has many aspects, one that warfighters and policy makers often talk about is the motivation to fight, which undoubtedly has its origins in the brain and is reflected in peripheral neuro-physiological processes. So one question would be, How can we disrupt the enemy's motivation to fight? Other questions raised by controlling the mind: How can we make people trust us more? What if we could help the brain to remove fear or pain? Is there a way to make the enemy obey our commands?"

In its chapter on 'Potential intelligence and military applications for cognitive neuroscience and related technologies' the report observes: "As cognitive neuroscience and related technologies become more pervasive, using technology for nefarious purposes becomes easier." Noting the use of opioid aerosol during the Moscow theatre siege of October 2002 [see 26 Oct 02] and noting also various more speculative incapacitation possibilities, the report addresses the "development of a more humane way of fighting a war by using cognitive weapons", continuing: "The fear that this approach to fighting war might be developed will be justification for developing countermeasures to possible cognitive weapons. This escalation might lead to innovations that could cause this market area [the "Degradation neurotechnology market"] to expand rapidly. Tests would need to be developed to determine if a soldier had been harmed by a cognitive weapon. And there would be a need for a prophylactic of some sort. [...] The concept of torture could also be altered by products in this market. It is possible that someday there could be a technique developed to extract information from a prisoner that does not

have any lasting side effects." [Note: Although "cognitive weapons" as thus envisaged by the NRC Committee would be chemical weapons in the sense of the CWC, the report makes no explicit reference to the treaty.]

14 August The Israeli Defence Ministry and the Israel Defense Forces Home Front Command announce that – in a move designed to cut maintenance costs – as of early 2009 atropine injectors will no longer be included in home emergency kits. In the event that Israel is threatened with a chemical attack, the drug will instead be distributed to the public through the healthcare system and at hand-out points nationwide. *Haaretz* quotes an unidentified "defense official" as saying: "Logistically, it would be very easy... We could distribute everything within two days and it would prevent the need to trouble the public by dragging it to refresher stations that also cost a lot of money... This is a move that is similar to that done in many other countries in the world who distribute protective kits." According to *Haaretz*, the public are required to take their kits for maintenance care every five years, which includes replacing old atropine injectors. Adults receive white needles containing two milligrams of atropine; children receive green needles holding one milligram; and children under the age of three receive orange needles of 0.5 milligrams. [See also 2 Apr]

14 August The USA has yet to complete implementation of the National Strategy to Combat WMD [see 11 Dec 02], according to former Assistant Defense Secretary Ashton Carter and former Undersecretary of State Robert Joseph. Writing in *The Boston Globe*, Carter and Joseph – who both served on the 14-person panel that carried out a review for the Defense Threat Reduction Agency (DTRA) – say: "[The three pillars of prevention, protection and response] levy three broad requirements on the Defense Department: It must be able to prevail in all WMD threat environments, from war to terrorist attack; it must maintain a credible nuclear force to deter WMD use by hostile states; and it must make a strong contribution to government-wide efforts to prevent, protect against, and respond to WMD proliferation and terrorism... Within the Defense Department, these activities are spread across a large number of civilian and military offices and commands. With so many factions, no one is truly in charge. While there is awareness within the Defense Department leadership of the importance of combating WMD, it is not given sufficient priority in practice or in budgeting... [The DTRA's] funding limitations reflect a broader issue of insufficient clarity, priority, and purpose in efforts to combat WMD. Powerful military and civilian advocates are needed in the Defense Department to recognize the importance of these missions and the agency's unique potential to support them... [The DTRA] requires substantially more resources and senior-level support to realize its full potential in helping to confront the WMD threats of today and tomorrow."

16 August The *Canberra Times* reports that Australian Minister for Defence Joel Fitzgibbon has said that in the past three years there have been 41 known breaches by Australian companies of the Customs (Prohibited Exports) Regulations, which control the export of sensitive equipment and goods on Australia's Defence and Strategic Goods List. Responding to a written parliamentary question, Fitzgibbon does not reveal the names of the firms involved or the specific equipment or materials involved in each case, but does confirm that the breaches occurred in relation to both military equipment and dual use technology, and that seventeen breaches involved the export of chemicals. The Customs Act provides penalties

including fines of up to \$275,000 and 10 years imprisonment for persons and companies who attempt to export controlled goods without a permit or licence with penalties.

17-22 August In Big Sky, Montana, a Gordon Research Conference takes place on *Science and Technology Policy: Governing Emerging Technologies*. Among those giving papers are Ruth David, Juergen Altmann, Gerald Epstein and Kathleen Vogel on the subject of 'Implementation of Governance Activities: Dual Use and Military'. Gordon Research Conferences is "a non-profit organization managed by and for the benefit of the scientific community" that provides "an international forum for the presentation and discussion of frontier research in the biological, chemical, and physical sciences, and their related technologies".

18 August From OPCW headquarters, the Technical Secretariat issues updated information [see also 23 May 07] on the current status of implementation of CWC Article VII obligations among the 184 state parties, as compared to when the National Implementation Action Plan was adopted at the eighth session of the Conference of the States Parties [see 20-24 Oct 03] when there were 155 parties: National Authority designated or established – 177, up from 126; Article VII.5 submission received – 126, up from 94; legislation covering all key areas – 82, up from 51; text of adopted measures provided – 112, up from 62; confirmation regarding Article XI.2(e) review; 59, up from 39. [Note: The Secretariat again omits to specify whether what it counts as "all key areas" of the national legislation includes measures for adequate implementation of the general purpose criterion.]

18 August At UN headquarters, the Chairman of the 1540 Committee, Jorge Urbina of Costa Rica, briefs the Security Council on the second [see 17 Dec 07] report of the Committee on the status of implementation of Security Council resolution 1540 [see 28 Apr 04]. The report states: "The new reports submitted by a number of States since 2006 and the additional information received from other States [see 6 May], or otherwise identified from official governmental sources, have enabled the Committee to present a more complete picture of the measures already in place or planned in the near future. Thus, it has been possible to demonstrate a qualitative improvement in progress towards achieving full implementation of the resolution. Notwithstanding that progress, the Committee concludes that Member States need to do far more than they have already done to implement resolution 1540 (2004). Consequently, achieving the goals of the resolution requires further attention by the Security Council and more intensive action, particularly on capacity-building and sharing lessons learned... Full implementation of resolution 1540 (2004) by all States will take time. Once it has been accomplished, vigilance and innovation will be needed to maintain effective policies. That task not only calls for a long-term commitment to the objectives of the resolution, but also the nurturing of a sense of urgency, given the gravity of the threat facing the international community." [See also 25 Apr]

18 August In Washington, DC, the Federal Bureau of Investigation (FBI) releases further information about scientific aspects of the case against the 'anthrax letters' suspect, the late Dr Bruce Ivins [see 6 Aug]. The format planned for the release was a pair of press conferences — one in the morning for reporters from scientific journals, the other in the afternoon for the general press. Government officials and people in Congress had been given private briefings the week previously. There is an opening statement by the FBI Assistant Director

who heads the Weapons of Mass Destruction Directorate, Dr Vahid Majidi. He describes in outline how the "unique pool of spore preparations known as RMR-1029" maintained at USAMRIID had been shown to be the source of the spores used in the 2001 mailings. Other such forensic details are disclosed, but there is no further disclosure of the intelligence and investigative information that combined with the forensic information to make the case against Dr Ivins. US Attorney Jeffrey Taylor [see 8 Aug] is present, however, and occasionally responds to questions about the investigation.

Dr Majidi goes on to speak of the "large cadre of non-Bureau scientists that helped us chart and navigate our scientific path through this unprecedented case". On the panel with him, and now introduced by Dr Chris Hassell, the current director of the FBI Laboratory, are six representatives of this cadre (which reportedly amounted to at least 60 scientists): Professor Paul Keim of Northern Arizona University; Dr James Burans, Associate Laboratory Director of the National BioForensic Analysis Center; Professor Rita Colwell of the University of Maryland, formerly head of the National Science Foundation; Professor Claire Fraser-Liggett of the University of Maryland, previously head of The Institute for Genomic Research (TIGR); Dr Jacques Ravel of the University of Maryland, previously at TIGR; and Dr Joseph Michael of Sandia National Laboratories. They have today been released from the non-disclosure agreements under which they had assisted the FBI.

The ensuing proceedings appear from the available reporting to have concentrated on clarification, explanation and expansion of the opening FBI statement. This is later confirmed by the official transcript. While most of the opening statement dwelt on RMR-1029, Dr Majidi also emphasizes two other matters. One was the fact that, contrary to some earlier reporting, no "intentional additives" had been combined with the mailed anthrax spores "to make them any more dispersible" [see 2 Aug 06]. Dr Michael, Dr Burans and an unidentified FBI official later explain that, when transmission electron microscopy was applied, the silicon that had been detected by scanning electron microscopy in a preliminary analysis at the Armed Forces Institute of Pathology was determined to be internal to the spores, not external, and had therefore, most probably, been imported naturally from the environment, a phenomenon that is recorded in the literature. The other matter was a conclusion drawn from the purity of the spores sampled from the four letters that had been retrieved: that, for the anthrax mailings, two different batches of spores had been grown, both of them from RMR-1029. Otherwise the core of the opening statement was as follows:

"The FBI began this complex investigation by coordinating analyses of the spore powders contained in the 2001 *Bacillus anthracis* mailings. We enlisted the help of many biodefense experts to assist our examinations, including those who had previously developed tests to differentiate strains of *Bacillus anthracis* and identify the spores in the letters as the "Ames strain."

"Other analytical strategies were employed to target the chemical and elemental profiles of the spore powders. Specific techniques included scanning and transmission electron microscopy, energy dispersive X-ray analysis, carbon-dating by accelerator mass spectrometry, and inductively coupled plasma-optical emission and mass spectrometry.

"Additional scientists from the Department of Defense and the Centers for Disease Control examined the spore materials and it was determined that there were many phenotypic variants within the samples.

"With generous support by both the National Institutes of Health, the National Science Foundation and other government agencies, FBI scientists worked with The Institute for Genomic

Research to determine if genetic mutations were responsible for the altered appearance of the variants found in the *Bacillus anthracis* letters. Several genetic mutants were discovered in these studies.

"FBI microbiologists contracted the assistance of several laboratories to develop highly specific assays to detect four specific genetic mutations found in the *Bacillus anthracis* letters.

"The mutation detection assays were validated and used by the FBI Laboratory to examine the repository of *Bacillus anthracis* Ames that was collected through the course of the investigation.

"This unprecedented scientific approach allowed the FBI to identify potential sources of the *Bacillus anthracis* used to produce the 2001 spore powders.

"Through a comprehensive analytical approach, the investigators were provided with validated scientific data which linked the material used in the 2001 attacks to material from USAMRIID identified as RMR-1029."

The panel responds to questions arising. Notably, Dr Hassell explains the contents of RMR-1029, in a description later paraphrased thus: "RMR-1029 was an unusual collection of spores, created in batches of growths from the original 'wild type' Ames anthrax collected from a Texas calf that ate contaminated grass and died in 1981. Researchers at the Army's Dugway Proving Grounds started the collection with 13 'production runs' of anthrax growth, followed by Ivins adding another 22 runs, to create 164 liters of spores in 1997. That collection, dubbed RMR-1029, was concentrated by Ivins down to two flasks by 2001, and to a one-liter flask by 2004." Participants also hear that, by late 2006 [*sic*], each of the 1070 Ames-strain isolates that the FBI had collected (from the 16 US laboratories known to have worked with the strain and from laboratories in Britain, Canada and Sweden) had been 'DNA fingerprinted' by the new process, and that only eight of the isolates tested positive, all but one from USAMRIID, and all eight originating in RMR-1029. Dr Majidi states that additional information will in due course be made available through peer-reviewed publications, of which there had already been several.

In subsequent commentary on the day's disclosures, there is sometimes praise for the work that the FBI had done, but the apparent absence of any physical evidence linking Dr Ivins to the attacks is again widely noted. Also, it is observed that no explanation had been given as to how each and every one of the people, other than Dr Ivins, who had had access to bacteria drawn from RMR-1029 – people at USAMRIID and at a laboratory of undisclosed identity, more than a hundred people in all – had been eliminated from the FBI investigation. (And the *New York Times* later reports that, in 1997, RMR-1029 was stored, not in Dr Ivins' lab, but in an adjacent building, this suggesting that the number of people who had had access to it might be two or three times larger than the number stated by the FBI.) In the absence of a trial, answers to these questions would somehow have to enter the public domain if the case could ever properly be closed. Suggestions made on how this might best be done include a full Congressional inquiry and also a comprehensive review of the FBI investigation as a whole, conducted either by the inspector-general of the Department of Justice or by an independent commission. Hearings are reportedly being planned by various committees of the US Congress.

Subsequent commentators note, too, that the FBI Science Briefing had so concentrated on the genetic tracing of the attack spores that other scientific and technological aspects of the case remained obscure. Dr Barbara Rosenberg [see 18 Feb 02] specifies four such aspects – the *Bacillus subtilis*

contamination noted in the 31 October 2007 affidavit [see 6 Aug] of earlier 'anthrax letters' but not the Senate ones or the RMR-1029 repository, the silicon content of the anthrax spores, their electrical properties, and the drying technique used – and asks whether more information on these matters might not eliminate Dr Ivins as a suspect or implicate others. What she writes is later addressed critically by Dr Serguei Popov [see 13 Nov 01], now a professor of biology at George Mason University, in a paper containing references to past practice in the former Soviet bioweapons programme.

18-22 August

In Geneva, there is the second [see 20-24 Aug 07] meeting of experts in accordance with the decision taken at the sixth BWC Review Conference [see 8 Dec 06] in preparation for the 2011 Review Conference. It is convened under the chairmanship of Ambassador Georgi Avramchev of the Former Yugoslav Republic of Macedonia. The purpose of the meeting is to discuss, and promote common understanding and effective action on: national, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins; and oversight, education, awareness raising and adoption and/or development of codes of conduct with the aim of preventing misuse in the context of advances in bio-science and bio-technology research.

Participating in the meeting are the following ninety-four BWC parties: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belgium, Benin, Botswana, Brazil, Brunei Darussalam, Bulgaria, Canada, China, Chile, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Ecuador, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Holy See, Honduras, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Italy, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lao People's Democratic Republic, Libyan Arab Jamahiriya, Lithuania, Malaysia, Malta, Mexico, Moldova, Morocco, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Tajikistan, Thailand, the former Yugoslav Republic of Macedonia, Tunisia, Turkey, Ukraine, the UK, the USA, Uruguay, Venezuela, Viet Nam, Yemen and Zambia. Also participating are Egypt, Myanmar, Nepal and Syria – all of which have signed but not yet ratified the Convention – but without taking part in the making of decisions. Three states – Cameroon, Israel and Mauritania – which are neither parties nor signatories to the Convention – participate as observers. The United Nations, including the Office for Disarmament Affairs, the United Nations Institute for Disarmament Research, the United Nations Environment Programme and the United Nations Security Council resolution 1540 Committee, also participates. The European Commission, the International Centre for Genetic Engineering and Biotechnology, the International Committee of the Red Cross, the Organization for Economic Cooperation and Development, the United Nations Educational, Scientific and Cultural Organization, the World Health Organisation and the World Organisation for Animal Health are given observer status.

Poster sessions are an innovation of this year's meeting. Experts, both governmental and nongovernmental, display a total of 32 posters on different aspects of the two main agenda topics and enter into one-on-one discussion with viewers.

The meeting adopts by consensus a report summarizing proceedings, which is based on a draft procedural report by the Chairman, and a substantive annex listing the lessons, proposals, considerations, etc taken from the working papers,

interventions, statements and presentations by states, international and regional organizations, as well as the “guests of the meeting”.

[Note: Much more detail on the meeting, as well as analysis, is available in *The CBW Conventions Bulletin* no 80 (September 2008), in a report by Graham Pearson.]

20 August In Moscow, the third international exhibition of arms and military equipment commences. According to Interfax-AVN military news agency, equipment being exhibited at MVSV-2008 includes “ammunition and special chemicals”.

21 August In Washington DC, attorneys for now-deceased ‘anthrax letters’ suspect Bruce Ivins [see 18 Aug], issue this statement: “Some press accounts have contained statements faulting the FBI for Dr Bruce Ivins’ suicide. We disavow such speculation”. Attorney Paul Kemp [see 6 Aug] says that both Ivins and his counsel had been treated “fairly and professionally” by the prosecutors and FBI agents overseeing the case.

22 August In India, the Ministry of Home Affairs releases *National Disaster Management Guidelines on Management of Biological Disasters*, which “set out comprehensive measures for preparedness, capacity development, training, public awareness and strengthening of the existing legislative and regulatory framework”. Announcing the release of the guidelines – which were the culmination of work by about 200 experts over a period of eighteen months – Home Minister Shri Shivraj Patil says that they will be regularly updated to suit the changing requirements. He adds: “While there will be no shortage of funds, the cooperation and coordination (at various levels) should be better than what we are doing now.” Amongst other things, the guidelines state: “While biological warfare does not appear to be a global threat, the use of some agents such as anthrax by terrorist groups poses a serious threat... The ease of production, packaging and delivery using existing nonmilitary facilities are major factors in the threat perception. The threat posed by bioterrorism is nearly as great as that by natural epidemic-causing agents.”

22 August The Israeli newspaper *Ma’ariv* quotes former Israel Defence Forces Intelligence Head, who is currently at Tel Aviv University’s Institute for National Security Studies, Res Brigadier General Aharon Ze’evi Farqah as saying: “As of today, I think the direct Iranian threat is merely a danger of a few missiles that could fall on Israel. They could be equipped chemical or biological weapons, though that too is uncertain, owing to Iran’s fear of a world reaction to use of unconventional weapons.”

25 August Chinese Foreign Ministry spokesman Qin Gang says that China “expect[s] Japan to do its utmost to quicken the process of removing abandoned chemical weapons [in China] and wipe out the related threats at an early date”. Speaking at a regular press conference, he says: “We hope Japan can carry out the Chemical Weapons Convention, honour the commitment in the memorandum it signed with China [see 30 Jul 99] and take responsibility.” [See also 17 Jan]

25-26 August In Colombo, Sri Lanka, there is a regional meeting of representatives of CWC national authorities and parliaments in Asia, which is organized with funds provided by the European Union under its Joint Action with the OPCW [see 19 Mar 07]. Attending the meeting are 65 participants –

including 26 parliamentarians and 15 representatives of national authorities – from 20 States Parties. It provides a platform for participants to discuss such issues as the adoption of comprehensive national legislation to implement the CWC, and the rights and obligations of parties under the CWC.

Addressing the seminar on the opening day, Sri Lankan Prime Minister Ratnasiri Wickramanayaka makes the following comments regarding recent allegations that the LTTE have used chemical weapons against government forces: “We have, hiding in parts of our country the world’s most ruthless terrorists as described by the American FBI. Therefore we have learnt to be always alert and be prepared... This is not to say that our local terrorists [...] have chemical weapons. We do not know... I am happy to be able to tell you that these terrorists, the LTTE are on their last legs... Our Security Forces have cornered them in their holes in a stretch of wilderness in the North of our country.” [See also 11 Aug]

25-27 August In Mexico City, there is a seminar on the implementation of Article VI of the CWC in Central America. The purpose of the seminar, which is organized jointly by the government of Mexico and the OPCW, is to increase the national capacity of CWC parties so they can comply with their obligations under the Convention. The following topics are addressed: the CWC and its status of implementation; import and export provisions; Article VI declarations requirements; Article VI industry verification; international cooperation and assistance activities; and implementation support programmes of the OPCW. Attending the seminar are seventeen participants from the following eight CWC parties: Belize, Costa Rica, Cuba, El Salvador, Honduras, Mexico, Nicaragua, and Panama. Running in parallel to the seminar is a two-day national course for members of the chemical industry, which more than forty participants attend.

26 August The US Army, Marine Corps, Navy, Air Force and Coastguard release *Operations in Chemical, Biological, Radiological, and Nuclear (CBRN) Environments*. The publication, which has been prepared under the direction of the Chairman of Joint Chiefs of Staff, revises and updates the previous joint publication on the subject dated 11 July 2000. It provides doctrine to assist commanders and staffs in planning, preparing for, conducting, and assessing operations in which their forces may encounter chemical, biological, radiological, and nuclear threats and hazards. The document sets out joint doctrine to govern the activities and performance of the Armed Forces in joint operations and provides the doctrinal basis for interagency coordination and for US military involvement in multinational operations. It also provides military guidance for the exercise of authority by combatant commanders and other joint force commanders, and prescribes joint doctrine for operations, education and training. It further provides guidance for use by Armed Forces in preparing their appropriate plans. [See also 24 Oct 07]

28-30 August In Krusevac, Serbia, a senior delegation of the Macedonian army visits the Atomic, Biological and Chemical Weapons Training Centre. This is part of a more general visit by the Macedonian delegation to Serbian army facilities at which a number of topics are discussed relating to co-operation between the two forces. During the visit, Serbian Lieutenant General Zdravko Ponos says that the Serbian army is able, amongst other things, to offer the facilities at the Centre to Macedonia upon request.

29 August The Indian Home Ministry has compiled a report that says terrorist groups backed by the Pakistani Inter-Services Intelligence Agency (ISI) could use chemical,

biological, nuclear or radiological weapons against India, thereby initiating a form of “super terrorism”, so reports the Press Trust of India. In its section on terror groups and weapons of mass destruction, the report says “super terrorism in this perspective can be defined as projected future use of chemical, biological, nuclear and radiological weapons by terrorist groups.” It also states that terrorists may use aircraft, buses or other such means to deliver the weapons thus circumventing the “rigorous” process of acquiring the capabilities required for delivery of chemical, biological or nuclear weapons. The report says that growing detection and neutralization of ISI cells in the last few years and their involvement in subversive activities indicate the type of serious threat that the network is going to pose to the internal security of the nation.

30 August In Dura, Palestine, police seize, amongst other things, “two gas bombs and small tear gas explosives [...] as well photographs documenting other illegal materials” from inside a mosque, according to the Information Office of the Palestinian National Authority. The raid on the mosque takes place during a series of raids on houses in and around Hebron in which “several weapons stashes, forged documents and incriminating photographs” are seized and a number of people arrested.

30 August In Washington DC, US presidential candidate Barack Obama says: “I will work the international community to make any use of disease as a weapon declared a crime against humanity”. The statement appears among Obama’s responses to fourteen questions submitted to both him and presidential candidate John McCain by ‘Science Debate 2008’ on the subject of “science and the future of America”. Following an initiative by six individuals in November 2007, more than 38,000 people – including scientists, engineers, Nobel laureates, elected officials, business leaders, and presidents of universities – submitted over 3,400 questions that the candidates should be asked. ‘Science Debate 2008’ then worked with “leading organizations” to craft the fourteen questions the candidates should answer.

September The US government conducted experiments on possibly hundreds of its own soldiers during the Second World War with a view, among other things, to establishing how different races would react to mustard gas exposure, according to study published in the *Journal of Law, Medicine and Ethics*. According to the author of the study, Susan Smith, the US government conducted at least nine research projects to examine African-Americans, Japanese-Americans and Puerto Ricans, with Caucasians used as a control group. The experiments, says Smith, were part of a larger project in which 60,000 soldiers were subjected to tests, including skin-patch tests, aerial spraying and one in which subjects were put in a chamber and subjected to inhaling gas to the point of becoming incapacitated. Smith, a historian from a University of Alberta, Canada, says: “Most frequently, the men had burns and blistering on the skin, especially on the face, hands, underarms, buttocks and genitals...They were sometimes in agony for days, weeks, and even months from the enormous, grotesque blisters and oozing sores.” Later, she says, many of them suffered long-term health problems, such as psychological disorders, cancer, asthma, emphysema and eye problems, including blindness. According to Smith, the scientists involved in the study thought that African-Americans had thicker skin than whites and would therefore have a greater level of immunity to the gas. They concluded, however that variations between individuals was much more prominent than variability between racial groups.

1-5 September In Geneva, there is the fourth 2008 meeting of the Group of Governmental Experts that was charged by the 2007 Meeting of the High Contracting Parties to the Convention on Certain Conventional Weapons (the CCW) to negotiate a proposal to address the humanitarian impact of cluster munitions. The meeting considers certain provisions of the current draft of a CCW protocol on cluster munitions. This “Chair’s paper” is made up of 13 articles, nine of which include bracketed or alternative forms of wording, and the beginnings of a technical annex.

Meanwhile, in the ‘Oslo Process’, 107 governments have agreed the text of a Convention on Cluster Munitions (CCM). This happened at the Dublin Diplomatic Conference on 30 May. A signing ceremony for the CCM in Oslo is expected in December. An authoritative observer has described the CCM as a “stunning achievement”.

2 September In Sydney, there is a ceremony to mark the opening of the National Center for Bio-Security, which is a joint venture between the Australian National University and The University of Sydney. Located at both universities, around fifty scientists at the Centre will research ways of combating biological warfare, naturally occurring diseases, the theft or misuse of sensitive research on micro-organisms, and the dangers posed by synthetic biology. Work will concentrate on 22 bacteria, viruses and poisons, which VOA News says the government considers “agents of concern”. These include anthrax, plague, smallpox and botulinum toxin. The signing ceremony is followed by the launch of a book, *Ethical and Philosophical Consideration of the Dual-Use Dilemma in the Biological Sciences*, authored by Seumas Miller and Michael Selgelid, who are both members of the Centre.

3 September US Assistant Secretary of State for Verification, Compliance, and Implementation Paula A DeSutter gives a briefing on the history of Libya’s decision to renounce its WMD programme [see 19 Dec 03]. “[T]here were many cases where Libya took us to facilities that we could have never known about. And so that level of demonstration – in fact, on the biological weapons issues, we said, okay, we are now convinced that there – you know, while there was an early program that’s terminating, how are we going to be sure that you’re not going to pursue that in the future? It’s very difficult to verify. And their answer was, oh, get US companies to come in co-production with us and then you’ll know everything that we’re doing – a little bit of a misunderstanding about how much US companies report to us.”

4 September Russia’s draft federal budget for 2009-2011 proposes, amongst other things, that spending on chemdemil should be 32 billion roubles in 2009, 24.5 billion roubles in 2010 and 23.2 billion roubles in 2011, so reports Interfax-AVN military news agency. Spending on chemdemil in 2008 was 28 billion roubles.

4 September At OPCW headquarters, following the completion of the twenty-third proficiency test, OPCW Director-General Rogelio Pfitzer releases a Note on the current status of laboratories designated for the analysis of authentic samples, in accordance with the decision taken by the Executive Council at its twentieth session in June 2000. In total, twenty laboratories from seventeen CWC parties are designated, four of which are, however, temporarily suspended owing to their having performed unsuccessfully in the proficiency test. The four are: the Research Institute for Organic Syntheses Centre of Ecology, Toxicology and Analytics, Czech Republic; the Laboratory for Chemical Weapons Convention

Verification Military Institute of Chemistry and Radiometry, Poland; the Chemical Analysis Laboratory, CB Department Agency for Defence Development, South Korea; and Laboratorio de Verificación de Armas Químicas Fábrica Nacional 'La Marañosa', Spain.

4 September In the UK, the Information Commissioner has ordered the Cabinet Office to release hitherto undisclosed memoranda and email messages that could provide evidence that the government's dossier on Iraqi WMD [see 24 Sep 02] "was deliberately manipulated in order to present an exaggerated case for military action", so reports *The Independent* (London). Regarding the freedom of information request – which was made by Chris Ames, a journalist for the *New Statesman* magazine – Richard Thomas rules there to be a clear public interest in seeing comments made about drafts of the dossier between 11 and 16 September 2002, in the days before the Prime Minister's Director of Communications, Alastair Campbell, suggested changes. Thomas adds: "Having considered the information which was withheld by the Cabinet Office, the commissioner is not satisfied that all of the comments on the draft dossier constituted information which engages the section 24 exemption [relating to national security]... Specifically, he [the commissioner] does not consider that the comments arising from bodies other than the Defence Intelligence Staff, and some of the comments made by officials to the Defence Intelligence Staff relating solely to the drafting of the dossier, can be said to amount to information whose exemption is required for the purpose of safeguarding national security." Following a ruling by the Information Tribunal earlier this year, the Foreign Office released the first draft of a document written by the former Information Director at the Foreign Office, John Williams, which Ames had claimed could have been used as the basis for the government's dossier [see 18 Feb 08]. The Cabinet Office does not subsequently publish the information requested within the statutory 35-day period. A later decision on the matter by the Information Tribunal is now therefore expected. [See also 26 Feb]

6 September In South Ossetia, Georgia, the Prosecutor-General of South Ossetia says investigators have obtained a document of the Georgian armed forces that refers to a plan to use saboteurs to poison the water supply in the city of Tskhinvali, and should this not prove possible then to shut off the water supply and blow up any wells. Holding the document up during a press conference, Taymuraz Khugayev quotes it as saying: "Poisoning the sources of water in good time before the storm of the city of Tskhinvali will facilitate undermining the moral and physical capabilities of the separatists, and make it considerably easier for Georgia's army units to carry out their combat mission."

7 September In Gaza, Fatah leader Hussam Khader says, in an interview with *Haaretz*, that the next Palestinian uprising against Israel "will not be one of stones, or even suicide bombers – it will be one of missiles and possibly even chemical weapons". Days before, Khader was released from an Israeli prison after serving six years for his leadership role in the second Intifada. [See also 25 Jun 06]

8 September In Hanoi, Viet Nam, government officials and experts from Viet Nam and the USA convene for the third annual meeting of the Joint Advisory Committee on Agent Orange to discuss ways of limiting the environmental effects of Agent Orange. Topics discussed include plans for using the \$3 million that the US Congress set aside in 2007 for the cleanup of dioxin in Viet Nam. According to the

Associated Press, part of the \$3 million allocation has already been set aside to help people with disabilities in Danang, the site of a former US air base. A joint study in Danang found dioxin levels were 300 to 400 times higher than internationally accepted limits, reports the Associated Press.

Eight days later, at the end of the meeting, Vietnamese and US officials announce that they are to set up two working groups to explore environment and health issues associated with Agent Orange. Speaking at a press conference, US Ambassador to Viet Nam Michael Michalak says the Ford Foundation has offered financial assistance to support work activities for the two groups. Michalak says the two groups will also benefit from the \$3 million set aside by Congress. According to Thanh Nien News, both sides have identified at least three dioxin hotspots, i.e. the town of Bien Hoa, the city of Da Nang, and the Phu Cat district in Binh Dinh Province. Le Ke Son, head of the Vietnamese Government's Office 33 that deals with Agent Orange, says that the southern part of Da Nang airport was recently found to be affected by dioxin contamination. Michalak said the US Department of Defense and Vietnam's Office 33 had co-organized a seminar last May to review 10,000 pages of documents and personal accounts to draw up a map of contaminated areas around the airport.

8 September In Bulgaria, the daily *Dnevnik* publishes details of documents from the foreign intelligence division of the Bulgarian state security service that identify the assassin of the Bulgarian dissident Georgi Markov as likely being an agent code-named 'Piccadilly' [see also 5 Jun 05]. The files, whilst incomplete, reportedly show how the agent underwent "special training" from Bulgaria's secret police, Darzhavna Sigurnost, and that he received two medals, several free holidays, and \$30,000 after Markov's murder in London in 1978. According to *Dnevnik*, the documents state that Markov's case was discussed with the KGB in Moscow, and that under a secret agreement between Bulgaria and the Soviet Union in 1972, the KGB was to provide Bulgarian intelligence with fast-acting poisons and devices. *Dnevnik* journalist Hristo Hristov obtained the 97 volumes of documents after winning a six-year legal case against the intelligence services, which had blocked his access to the archives. Hristov says it is not clear whether Bulgaria had provided the files to UK police. The publication by *Dnevnik* of the files coincides with the publication by Hristov of his book *The Double Life of Agent Piccadilly*, which is based on the documents. Hristov identifies Markov's possible killer as Danish national Francesco Gullino and rejects the long-held belief that an umbrella was the murder weapon. Rather, he claims that the assassin employed the umbrella as a diversion while using a pen-like injector, supplied by the KGB. [See also 20 Jun]

8-26 September In Helsinki, there is a course for laboratory technicians on the analysis of chemicals relevant to the CWC at the Finnish Institute for Verification of the CWC (VERIFIN), University of Helsinki [see also 26 Sep – 7 Oct 05]. The aim of the course, which is conducted jointly by VERIFIN and the OPCW, is to improve participants' practical skills in analysing chemicals by using gas chromatography (GC) and gas chromatography-mass spectrometry techniques (GC-MS). The course consists of the following elements: preparation of environmental samples; novel sample-preparation methods; properties of CWC-related chemicals; introduction to GC and GC-MS equipment; interpretation of mass spectra; hands-on exercises on sample preparation; hands-on use of GC and GC-MS equipment; hands-on exercises in quality assurance and the maintenance of instruments; reporting results during OPCW proficiency tests.

9 September In the USA, the *Los Angeles Times* joins a request made five days previously by *The New York Times* for a court to order the release of warrants and supporting materials relating to the anthrax letters [see 15 Oct 01] arising from searches undertaken of property owned or used by Dr Bruce E Ivins, Steven J Hatfill and Hatfill's former girlfriend. The papers argue that "questions continue to be raised about how the investigation became misdirected in focusing on Dr Hatfill (at huge expense to the American taxpayer), why it took seven years to complete the investigation, and whether the government's conclusion that Dr Ivins was solely responsible for the anthrax mailings is sound [see 6 Aug]". [See also 8 Aug]

10 September In Bulgaria, the authorities have decided not to close the investigation into the poisoning of Bulgarian dissident Georgi Markov in London on 11 September 1978, so reports Agence France-Presse. The decision, which comes the day before the 30-year Bulgarian statute of limitations takes effect, is linked to the continued investigation to the unsuccessful murder attempt on Bulgarian exile Vladimir Kostov in Paris a month before, which involved the firing of a pellet into Kostov's back. AFP quotes Boiko Naydenov, the head of the Bulgarian investigative services, as saying that since the case involves at least two victims, "there is a 35-year statute of limitations, which can be prolonged further if the case has been interrupted". He adds: "It is in Bulgaria's interest to bring this case to a conclusion once and for all, to do away with the ghosts of the past. If someone has ordered a killing, he has to be identified and taken to justice... We will now put every effort in speeding up the investigation to get to the truth." Meanwhile, the *International Herald Tribune* quotes Andrei Tsvetanov, the chief Bulgarian investigator in the Markov case since 1999, as also saying the case will be kept open. "We need more time to find the perpetrator and organizer," he says in an interview, adding that the inquiry has been officially broadened to include the Kostov case. AFP, reporting that the UK authorities plan to continue their investigation into the death of Markov, quotes an unidentified spokeswoman for Scotland Yard as saying: "We continue to work with the appropriate international authorities to investigate any new information that's passed or made available to police [see 20 Jun]."

Two days previously, in an interview with Reuters news agency, Luchezar Penev, head of Bulgaria's Serious Crimes Investigation unit, says that there has been no confirmation that an umbrella was used to inject the poison into Markov. "The famous umbrella is for someone who is writing a book... there is no evidence for such a thing... The pellet's size was several times smaller to contain the necessary quantity of ricin, if we accept it's ricin, needed to kill a man," says Penev.

Speaking to Bulgaria's *Dnevnik* newspaper a week earlier, Bogdan Karayotov, who led the Bulgarian investigation into the Markov case from 1990-1999, said that his Bulgarian masters granted 'Picadilly' – the codename for the chief suspect: Francesco Gullino, a Dane of Italian descent – holidays and rewards shortly after Markov's death [see 8 Sep]. "All this led us to think that this agent had something to do with what happened to Georgy Markov," said Karayotov.

10 September In Washington DC, Partnership for a Secure America – a bipartisan commission of 22 former US government officials – releases *WMD Report Card: Evaluating US Policies to Prevent Nuclear, Chemical & Biological Terrorism Since 2005*. The 122-page report gives the government an overall grade of "C" for its efforts to prevent nuclear, chemical and biological terrorism. The panel says the report is a part of its larger effort to assess the government's

progress toward implementing the recommendations of the 9/11 Commission [see 22 Jul 04]. Amongst other things, the report says that "US disengagement from the [BWC] has undercut the confidence necessary for effective multilateral cooperation". In this regard, it says the USA should work towards better transparency and trust by participating in and complying with the BWC and should support the appointment of a global authority to coordinate international cooperation on reduction of biological threats.

12 September North Korean state-run news agency KCNA broadcasts the following statement: "[T]he US imperialists [...] brutally put down the struggle of the people in different parts of South Korea against the US 'military government' in October 1946 by setting in motion planes, tanks, chemical weapons, leaving more than 25,000 people dead." [See also 13 May 06 and 27 Jan 07]

12 September The German daily *Handelsblatt* reports that the German Foreign Ministry has made an official protest to the US Embassy in Berlin about an editorial written by the US ambassador to Sweden Michael M Wood in a Swedish newspaper criticizing the construction of the Baltic Sea gas pipeline [see 22 Feb]. In the editorial, Wood argued that the pipeline would pose a security threat to the region as it would allow Russia to use energy as a means to gain political leverage. The pipeline, which is being constructed by the Nord Stream AG – a joint Russian-German consortium – is planned to run from Vyborg in Russia to Greifswald, Germany.

Seven days previously, the Russian news agency Regnum reported Nord Stream as having confirmed that a decision had been taken to re-route the pipeline to the south of Demark's Bornholm Island, following environmental concerns relating to the presence of chemical munitions that were dumped in the sea to the north of the island at the end of the Second World War [see 9 Nov 07].

13 September In New York, the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism holds its first public hearing [see also 29 May]. The nine-member Commission, which is chaired by former Senator Bob Graham, was established by the House of Representatives to implement a key recommendation of the 9-11 Commission [see 22 Jul 04], to assess current activities, initiatives, and programmes of the USA to prevent the proliferation of weapons of mass destruction and terrorism.

Nine days later, the Commission arrives in Russia to tour nuclear security training sites and meet with counter-terrorism and counter-proliferation specialists.

13 September In Texas, Hurricane Ike – a Category 2 hurricane with winds of 110 mph – hits the town of Galveston, where the University of Texas Medical Branch (UTMB) is building a new BSL-4 laboratory. UTMB subsequently issues a statement saying that while the basement of its existing BSL-4 laboratory has flooded as a result of the hurricane, the new laboratory which is "at the end of phase of construction" did not suffer any damage "as far as we can see".

14 September In Munich, at a workshop it had recently conducted on biosecurity, the Industry Association Synthetic Biology (IASB) adopts a resolution to mandate sequence screening for its members, so reports *New Scientist*, which states that the measure is intended to encourage researchers to order DNA only from those companies having the IASB seal of approval obtainable following successful screening. The IASB is a consortium of gene-synthesis

companies located mainly in Europe. It later submits a draft of its projected code of conduct to the 2008 Meeting of States Parties to the BWC.

15 September In Sri Lanka, at least sixteen soldiers are hospitalized with breathing difficulties after being attacked by LTTE forces in the areas of Akkarayankulam and Vannerikulam in the district of Kilinochchi, with what the Colombo *Daily Mirror* reports as being “two canisters with CS gas in grenade launchers”. According to other soldiers on the scene, those affected were also vomiting and some suffered burn injuries.

The following day, the Sri Lankan government despatches specialist doctors and nurses – together with medicines and equipment – to hospitals in Vavuniya, Padaviya, Welioya and Mannar in preparation for a possible chemical attack by the LTTE. The Ministry of Health and Nutrition announces that Professor Ravindra Fernando has been tasked with giving special training to the personnel on chemical and unconventional weapons attacks and medical emergencies arising from such attacks.

Two days later, the Sri Lankan Army issues the following statement: “The Sri Lanka Army, as one of the most professional and battle-hardened outfits in the South Asia region, is fully equipped and well geared to face any unacceptable chemical or gas attacks of the enemy.” Meanwhile, interviewed by state media, Army Commander Sarath Fonseka says: “If the LTTE fires CS canisters at us we have the capability to fire more powerful gases against them as we have the mandate as a sovereign state to make use of these gases to curb any terror activity of the LTTE.” He adds: “We have already provided gas masks to the troops operating in Vanni [Vannerikulam] to face any type of gas attacks by the LTTE.”

Three days later, the Sri Lankan Army issues a further statement, which says: “Investigations which went into the incident soon after admission of those soldiers to hospitals have affirmed Tiger terrorists have used CS gas, generally used for anti-hijack or hostage operations in Wannai [Vannerikulam].” According to the Colombo *Daily Mail*, the statement also says that the Sri Lankan Army is fully equipped to deal with any chemical or gas attacks by the LTTE, and that in this regard, it has already distributed gas masks among the troops fighting in Vannerikulam. It also points out that the use of any chemical or gas in warfare is contrary to international law.

Four days later, the Colombo *Daily News* reports military spokesman Brigadier Udaya Nanayakkara as saying that “according to intelligence information the LTTE is at an experimental level of using CS gas” and that it does not actually possess chemical weapons. [See also 25-26 Aug]

Four weeks later, the Sri Lankan Ministry of Defence says, in a statement, that the LTTE has again launched “poisonous gas attacks” in Akkarayankulam during a military offensive aimed at capturing the LTTE stronghold of Kilinochchi. The Army’s forces, however, “withstood the chemical attack and beat off the terrorists”. The (Colombo) *Sunday Times* reports the LTTE as accusing the Sri Lankan Army of also using a “tear gas”, an allegation which is dismissed by an unidentified “high-ranking military source” as “just propaganda”. Meanwhile, the National Prayathna Organization releases a report which confirms that the gas used against government forces in Vannerikulam and Akkarayankulam was CS. The Colombo *Virakesari* quotes the report as saying: “Research into chemical weapons in 1997 had revealed that this specific gas should not be used in the battlefields because it would be irreversibly fatal if the human body absorbed 2.3 mg of CS gas. Therefore, the use of this poisonous gas by the LTTE is not acceptable.” The report, according to *Virakesari*, states that several soldiers

died of suffocation while many others were admitted to hospitals. *Virakesari* also reports the National Prayathna Organization as saying that “the gas had been used very often during the last few months”. [See also 11 Aug]

15 September The US Air Force is planning to test a 20-foot, 30,000-pound bunker-buster dropped from a B-52 and is also considering the possibility of dropping it from B-2 aircraft, so reports *USA Today*, quoting an Air Force spokeswoman. Vicki Stein refuses to identify specific sites that could be targeted by the Massive Ordnance Penetrator, saying only that the weapon is intended “to defeat hard and deeply buried” sites used for weapons production in “hostile states”. One week previously, the Department of Defense announced that it proposes to enter into a \$77 million deal with Israel to sell 1,000 GBU-39 bunker-buster bombs, which would be consistent with the US interest of assisting Israel “to develop and maintain a strong and ready self-defense capability”. The deal has yet to be approved by Congress.

15-19 September In New Zealand, an exercise takes place under the US-led Proliferation Security Initiative, involving the simulated search of a ship for weapons of mass destruction and dual-use technologies. The aim of ‘Exercise Maru’, which is organized by the New Zealand Customs Service with assistance from other government bodies, is to evaluate New Zealand’s counter-proliferation capabilities. Australia and France contribute naval vessels for the drill. In total, more than 200 military, customs and police personnel from the Pacific and Southeast Asia participate in, or observe the exercise. [See also 27-28 May]

16-17 September In Washington DC, the director of the US Federal Bureau of Investigation (FBI), Robert S. Mueller III, testifies to Congress, during what had originally been scheduled as regular oversight hearings, on the investigation of the late Bruce Ivins, suspected of responsibility for the 2001 ‘anthrax letters’ [see 21 Aug]. Director Mueller appears before the Judiciary Committee first of the US House of Representatives and, next day, of the US Senate, these being the committees that have oversight responsibility for the Department of Justice and therefore for the FBI as well. At the outset he is rebuked by the Chairman of the House Committee, Rep John Conyers, Jr, for failing to respond to numerous prior requests for information from the Committee and then for appearing before it without answers even to the questions he had been advised would be asked. However, he discloses that the FBI had been in discussion with the National Academy of Sciences and would now ask it to conduct an independent review of the genetic tracing of the attack anthrax spores that had pointed investigators towards Dr Ivins. He tells the House committee that the review is to be conducted by “a panel of scientists that will be pulled together by the National Academy”.

Before the Senate committee, Director Mueller is again rebuked for the unresponsiveness of his agency towards information requests, although both the Chairman, Senator Patrick Leahy, and the ranking Republican, Senator Arlen Specter, recognise that this may have been because the Department of Justice had stalled FBI responses. Chairman Leahy, who had himself been a recipient of one of the ‘anthrax letters’ in 2001 and who had received private FBI briefings on the case, expresses strong doubts that Dr Ivins could have acted alone: “If he is the one who sent the letter, I do not believe in any way, shape or manner that he is the only person involved in this attack on Congress and the American people. I do not believe that at all. I believe there are others involved, either as accessories before or accessories after the fact. I

believe there are others out there. I believe there are others who can be charged with murder.” He does not elaborate on his statement. Senator Specter also expresses scepticism. Director Mueller reaffirms the Justice Department’s view that Dr Ivins had been the mastermind and sole attacker, but says that “even if the case does become closed, if we receive additional evidence, indicating the participation of any additional person, we certainly would pursue that”. Justice officials had recently told reporters that, contrary to earlier expectations, the case was now likely to remain open for three to six more months.

In subsequent commentary, the fact that key senators from both political parties had openly questioned the FBI’s case is taken as casting further doubt. The impending National Academy review is welcomed, but as a belated first step that does not go far enough: “Even if the FBI got the science right”, says the *Washington Post*, “it still must explain how and why it eliminated from suspicion some 100 other people who had access to [flask RMR-1029]”. Calls for a comprehensive outside review [see 18 Aug] are reiterated. Further Congressional hearings now seem unlikely until after the impending presidential election, the present session of the Congress being expected to end next week.

The text of the Justice Department letter to the National Academy commissioning the study is soon posted on the web. It includes the following:

“To frame the scope of the NAS study, we are asking the panel members to consider the following questions:

“1) Was the methodology used to identify and assay the genetic mutations observed in *Bacillus anthracis* (BA) samples valid and scientifically accepted?

“2) Can genetic assays reliably prove that BA samples from the mailing letters share the same ancestor as the RMR-1029 sample? What are the statistical significance of this finding and the rate of potential false positives (i.e., what are the odds of the BA samples from the letter and RMR-1029 to have the same four genetic mutations but not being related)? Are the four mutation markers used by the FBI genetically stable for attribution purposes?

“3) What are the likelihoods that samples with zero, one or two genetic mutations may be the parent material for the anthrax mailings?

“4) Is it possible for bacterial DNA to be recovered from sterilized or decontaminated production equipment (e.g., fermentor, lyophilizer, spray drier, etc.)

“5) What effects do growth conditions have on distribution of elements (e.g., Si), stable light isotope ratios, and C-14 dating?

“6) Could an agar-based method be used to produce similar spore preparations as those seen in the 2001 BA mailings?

“7) How easy is it to contaminate a BA production process (rudimentary or otherwise) with *B subtilis*?

“8) Which methods could be used to explore the distribution and concentration of elements within a BA spore? Do they provide adequate spatial resolution?

“9) Can carbon-14 data be used to date the growth of BA samples collected from the BA mailings to within three years of 2001?

“10) Are there any reliable methods that can be used to accurately geolocate the facility/location where BA spores may have been grown?

“11) Is there a need for post-treatment of BA to result in spore powders with a friable character? Alternatively, can BA samples dried with a rudimentary methodology pose an inhalation hazard resulting in pulmonary anthrax? Were BA spores in 2001 mailings treated post production to make them more friable? Were BA spores in 2001 mailings

weaponized?

“12) Is it possible for BA spores to penetrate paper envelopes such as those used in the 2001 mailings?

“13) Is it feasible for the mail sorting machines to have assisted in the pulverization and aerosolization of the BA spores in the postal facility?

“14) Can external cross contamination of letters with BA powders result in pulmonary anthrax?

“15) In its totality, and consistent with the Federal Rule of Evidence 702, would testimony regarding the methods used to link the mailed anthrax to RMR-1029 be considered by NAS (based upon its review of those methods) to be: (1) based upon sufficient facts or data, and (2) the product of reliable principles and methods?

“Lastly, I should point out that apportion of research related to the above questions may be contained in US government classified documents. As such, it will be very desirable if a small number of panel members possessed appropriate USG security clearances to gain access to documents classified at the top secret level.”

17 September Russia plans to increase its spending on chemdemil over the next three years to about \$3.2 billion, having spent \$1.3 billion so far this year, so reports Interfax news agency, quoting an unidentified “legislative spokesman”. The source says that under current budget plans a further \$1.3 billion will be spent in 2009, nearly \$1 billion in 2010 and slightly more than \$900 million in 2011. The budgeted figures for 2009 and 2010 represent a \$382-million increase from earlier plans [see 29 Jun 07]. [See also 17 Jun]

17 September The US Government Accountability Office transmits to Congress *Biosafety Laboratories: Perimeter Security Assessment of the Nations Five BSL-4 Laboratories*. The purpose of the report is to assess the key perimeter security controls at the USA’s five operational BSL-4 laboratories. It states as follows: “Select Agent Regulations do not mandate specific perimeter security controls that need to be in place at each BSL-4 lab, resulting in significant differences in perimeter security between the nation’s five labs. While three labs had all or nearly all of the key security controls GAO assessed – features such as perimeter barriers, roving armed guard patrols, and magnetometers in use at lab entrances – two labs demonstrated a significant lack of these controls. Specifically, one lab had all 15 security controls in place, one had 14, and another had 13 of the key controls. However, the remaining two labs had only 4 and 3 key security controls, respectively... Our observation that the three labs with strong perimeter security all were subject to additional federal oversight outside of the DSAT [Centers for Disease Control and Prevention (CDC), Division of Select Agents and Toxins] program leads us to conclude that minimum specific perimeter security standards would provide assurance that all BSL-4 labs are held to the same security standard... [W]e are recommending that the Director, CDC, take action to implement specific perimeter security controls for all BSL-4 labs to provide assurance that each lab has a strong perimeter security system in place. The CDC should work with USDA [US Department of Agriculture] to coordinate its efforts, given that both agencies have the authority to regulate select agents.”

A month later, when the report is released publicly, the Associated Press identifies the two laboratories lacking sufficient perimeter security as being those at Georgia State University, Atlanta, and Southwest Foundation for Biomedical Research, San Antonio, on the basis that “the report included enough details for the AP – and others knowledgeable about such labs – to determine their locations”.

18 September In Paris, the Presidency of the Council of the European Union hosts the first EU-Central Asia Forum on security issues, the aim of which is to consolidate cooperation between the European Union and Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan and Kyrgyzstan, in accordance with the EU Strategy for Central Asia adopted in June 2007. With regard to weapons of mass destruction, a joint declaration issued at the end of the forum states: "The proliferation of weapons of mass destruction and their means of delivery represents a particular threat to peace and international stability. We reaffirm our support for the multilateral treaties and agreements as well as international initiatives on non-proliferation, and we agree to step up our efforts with a view to their full implementation... We intend to pool our experience and cooperate in establishing effective export control systems, including conventional arms exports, strengthening border controls and securing sensitive facilities and sources of nuclear, radioactive, biological and chemical material, in order to prevent any risk of proliferation and procurement by terrorist groups."

18 September On the US-Canadian border, more than 300 personnel from fifteen US federal and state entities and eight Canadian agencies participate in an exercise to test their ability to deal with the detonation of a chemical weapon on the border. 'Operation Sweetgrass', which took six months of planning, involves the simulated detonation of a chlorine bomb, which has been stopped at the port of entry at Sweetgrass, Montana.

19 September In Naalin, Israel, for the first time police use what they call a "Skunk" against crowds protesting against the construction of the West Bank barrier. It is a malodorant-dispersing weapon. WiredBlog quotes Israeli police as saying that they used a water-spraying device to shower the liquid on the demonstrators, forcing most to rush off to change their clothes. The name of the weapon, which was developed to disperse crowds, originates from the analysis by Israeli defence scientists of the liquid squirted by skunks. According to BBC News Online, the Skunk has "an overpowering mix of rotting meat, old socks that haven't been washed for weeks – topped off with the pungent waft of an open sewer". It contains "no illegal chemicals, no proscribed substances – just a thoroughly disgusting mix of yeast, baking powder and a few other 'secret' ingredients".

19 September In The Hague, the ninth [see 28 Sep 07] OPCW Associate Programme concludes, having commenced ten weeks previously. The aim of the course was to promote the peaceful uses of chemistry by enhancing and improving the skills of qualified chemists and chemical engineers from CWC parties with developing economies and economies in transition. It also increases the number of experienced personnel that national authorities and the OPCW can draw upon. In total, 26 participants from the following 24 CWC parties attended the programme: Argentina, Botswana, Congo, Fiji, Ghana, Iran, Jamaica, Jordan, Laos, Lesotho, Libya, Malaysia, Mauritius, Mongolia, Nigeria, Pakistan, Qatar, Saint Lucia, Serbia, South Africa, Tajikistan, Uganda, Zambia and Zimbabwe.

22 September In Somalia, "several officials [...] who work both for the Transitional Federal Government of Somalia as well as the autonomous government in Puntland state" have said that an Iranian ship being held by pirates could be carrying chemical weapons, according to the US-based *Long War Journal*. Within a period of three days, a number of pirates who had inspected the seven cargo

containers on the ship – which is docked at Eyl, a fishing village in northeastern Somalia – developed health complications such as skin burns and loss of hair. The containers reportedly contained "gritty sand-like contents". Within two weeks, sixteen of the pirates had died, either on the ship or onshore. However, the *Journal* quotes Mahmud Akhmadi of the Parliamentarian Committee on Security and Foreign Relations of Iran as saying: "Our vessel was not travelling from Iran but was going from China to the Netherlands. It was carrying rocks, cement and metals and not chemicals as reported by our foes." The *MV Iran Deyant* – which is owned and operated by the Islamic Republic of Iran Shipping Lines, a state-owned company run by the Iranian military – was hijacked in the Gulf of Aden four weeks previously. Two weeks thereafter, the US Department of the Treasury imposed sanctions on the company for alleged weapons smuggling. The ship's official documentation states that it had planned to sail to Rotterdam to offload 42,500 tons of iron ore and "industrial products" purchased by an unidentified "German client". The *Long War Journal*, which is owned by a "nonprofit media company", says it "is dedicated to providing original and accurate reporting and analysis of the Long War (also known as the Global War on Terror)".

22 September In Indianapolis, a court dismisses a case brought by a number of organizations, including the Sierra Club and the Chemical Weapons Working Group, seeking to halt shipments of hydrolysate from the Newport chemdemil facility to an incinerator in Texas. The ruling comes despite the fact that the last shipment had left the Newport facility eighteen days previously, being a month after the facility completed its destruction operations [see also 8 Aug]. District Judge Larry McKinney rules that the hydrolysate, a by-product of the destruction of VX, is a hazardous waste and not a munition or chemical agent. In this regard, he says the Army had adequately considered all the risks inherent in the transportation of the waste. Last year, McKinney rejected a motion for a preliminary injunction by the claimants to halt ongoing shipments of the waste [see 3 Aug 07], two months after the Army had voluntarily stopped shipments while awaiting a ruling. Robert B Billington, the programme manager for chemical stockpile elimination at the Chemical Materials Agency says a small amount of the waste remains in the two storage tanks at the Newport facility, which will be removed and sent to Texas as the facility is dismantled over the next two years. Craig Williams of the Chemical Weapons Working Group says the groups do not plan further action since the waste has been shipped.

22-26 September In Seoul, South Korea, the fourth [see also 18-22 Jun 07] regional assistance and protection course for Asian CWC parties takes place. Attending the course, which is jointly organized by the government of South Korea and the OPCW, are around thirty participants who receive training in planning and building support teams in civil protection, civil defence, and decontamination operations in contaminated areas in the event of the use or threat of use of chemical weapons. The participants also receive an introduction to the use of individual and collective protective equipment, monitoring, detection, and decontamination techniques against chemical weapons. A practical emergency response exercise is also included.

22-26 September In Tshwane, South Africa, there is a basic course for personnel of African national authorities involved in the national implementation of the CWC. Attending the course are representatives of the following twenty-two CWC parties: Algeria, Benin, Burundi, Cameroon, Central African

Republic, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, the Gambia, Kenya, Liberia, Madagascar, Malawi, Mauritius, Morocco, Mozambique, Nigeria, Rwanda, Sierra Leone, Tanzania, Uganda and Zambia. The course is the first to be held at a regional level in Africa under the OPCW Programme to Strengthen Cooperation with Africa. Its purpose is to assist regional CWC parties to effectively comply with their obligations under the Convention, and to increase national capacities for fulfilling the objectives set out in the Article VII action plan [see 20-24 Oct 03]. The course is organized jointly by the government of South Africa and the OPCW.

22-26 September In Paris, there is the seventh [see 23-31 Oct 07] training course at the French Training Centre for the Prohibition of Chemical Weapons (CEFFIAC) for personnel of national authorities involved in receiving inspections under the CWC. The course, which is jointly organized by the French national authority and the OPCW, is aimed at personnel of national authorities responsible for implementing the CWC at the national level. It includes both instruction and practical exercises and covers various issues relating to the administrative, legal, and verification provisions of the CWC. Representatives from the following twenty-three CWC parties participate in the course: Argentina, Benin, Cambodia, Canada, Central African Republic, Cuba, Ethiopia, Georgia, Germany, Guinea, India, Indonesia, Madagascar, Malaysia, Mexico, Moldova, Poland, Senegal, Serbia, South Korea, Ukraine, the UK, and Zambia.

23 September In Nurestan Province, Afghanistan, 300 police officers are poisoned by Taleban militants, though there are no casualties, so reports the Afghan daily *Hasht-e Sobh*. The purpose of the action, according to the report, was to test "the tactic of poisoning" with a view to carrying out a "primary experiment there and in the other regions with new facets". The report does not state what substance was used in the alleged poisoning.

23 September The Ukrainian Cabinet has adopted a resolution which, amongst other things, provides for "an inventory" of the Russian Black Sea Fleet to be undertaken in November with a view to establishing whether it is carrying any chemical weapons, and if so whether they are being stored in accordance with relevant Ukrainian laws, so reports the Ukrainian opposition newspaper *Stolichnye Novosti*. The inventory is to be carried out by the state administration for Sevastopol together with the Emergencies Ministry and the Environmental Protection Ministry. Responding to the plan, *Stolichnye* quotes Russian General Anatoliy Nogovitsyn as saying: "[The seamen of the Fleet] have one supreme commander-in-chief – the Russian president, and as far as we are concerned any statements from outside are illegitimate." [See also 13 Sep 05]

23 September Denmark has compiled annual figures which show that catches of chemical munitions east of the island of Bornholm – which were dumped there at the end of the Second World War – have substantially decreased during the past several years, according to the Baltic Marine Environment Protection Commission (HELCOM). The statistics show that, based on information received as of 1 April 2008, fishermen reported two incidents where chemical munitions were caught in their nets in 2007 and only one in 2006, compared to 25 incidents reported in 2003. According to HELCOM, this is the lowest number since it began tracking the information in 1995. According to HELCOM, however, the decrease has not been attributed to any specific factors. As was the case with the increase in 2003, the reason for the

decrease is unknown. HELCOM states that the variations are "probably" due to a combination of different factors, such as the intensity of fishing activities in the areas close to the dumped munitions, and the recommendations issued by HELCOM and local authorities. [See also 21 Dec 07]

24 September In Liverpool, a magistrates court sentences two company directors after they were found guilty of failing to notify the government that their company produced more than one metric ton of N, N-dimethylaminoethyl-2-chloride hydrochloride. It is the first penalty imposed for violation of the Chemical Weapons Act 1996 [see 16 Sep 96], which requires companies to notify the government when they produce certain quantities of agents that fall within the control regime of the CWC. In 2002, 2003 and 2004, Colin Stott and Simon Knowles, the directors of Organic Intermediates Ltd, failed to file mandatory notices that the company had manufactured more than 1 metric ton of the pharmaceutical product. They are fined £6750 and ordered to pay £8000 towards the prosecution's costs. Responding to the sentencing, Business Minister Malcolm Wicks says: "This is the first prosecution under the UK's Chemical Weapons Act and demonstrates just how seriously the UK takes its responsibilities under the [CWC]... The UK has a very good record and around 400 firms routinely comply with the requirements, but this sentence should convey to other companies, and to liquidators of companies that are wound up, the importance of meeting the requirements of the Act and the Convention. Legal requirements relating to controlled chemicals must be fully met – and where organisations fail to do so, prosecution is likely... The UK is practicing what it preaches - that all member states of the Convention should implement and enforce their domestic legislation."

24 September In the US House of Representatives, Congressman Rush Holt (Democrat – New Jersey), who is chair of the House Select Intelligence Oversight Panel, introduces a bill that would establish a national commission to scrutinize the 'anthrax letters' attacks of 2001 and their investigation by the FBI [see 16-19 Sep], and which would make recommendations to prevent and handle bioterrorism in the future. The 11-person commission appointed by the president and Congressional leaders and with powers of subpoena, would be a scaled-down version of the "9/11 commission" that reported in 2004 – the National Commission on Terrorist Attacks upon the United States [see 22 Jul 04]. It would hold public hearings and report within 18 months.

The present Congressional session is about to end, but, after the presidential election, his spokesman announces that Rep Holt plans to re-introduce the bill during the next session.

24 September The US Department of Justice posts on its website twelve more documents that have been unsealed in the Ivins case; again [see 6 Aug], they are applications for search warrants. Journalists following the case find in them "no major disclosures". The FBI is resisting requests under the Freedom of Information Act for disclosure of "at least 15,000 pages" of additional documents.

24 September The US Department of Defense releases a revised regulation on the mission, functions, and command and staff relationships of the US Army Nuclear and Combating Weapons of Mass Destruction Agency.

25 September Israeli Defense Minister Ehud Barak has approved a plan under which all household bomb-shelters built after 2009 will have to be fitted with chemical and biological filters, so reports *The Jerusalem Post*. Under

the plan, however, the Defence Ministry will not demand that filters be installed in "secure rooms" which have already been built. An unidentified Defence official is quoted by the *Post* as saying: "All secure rooms have a metal tube opening to outside, and that is where the filter can be installed, at a low price of around \$1,000... We cannot force those people to buy the filter, and the new directive will only pertain to new homes and apartments." According to "officials", the filters will not completely eliminate the need for gas masks, which would still be needed by people when they left their homes. However, Director of the fortifications department in the Home Front Command Roni Seri says: "The filter will make it possible for those in the room to stay there without wearing a gas mask." *The* (Philadelphia) *Evening Bulletin* reports that the plan will be introduced upon a supplier being nominated, which should happen within the next year. [See also 14 Aug]

25 September In northern Lebanon, a unit of the Syrian army specialized in dealing with chemical weapons arrived two weeks previously to clean up an area contaminated by "military chemical materials" leaking from corroded barrels stored there by Hezbollah, so reports the Kuwaiti-based newspaper *Al-Siyasah*. The unit was reportedly met at the border by a contingent from Hezbollah and a chemical warfare unit belonging to the Iranian Revolutionary Guard. The report does not specify the chemical in question, only that it affected residents, including children, across a wide area of Al-Nabatiyah "negatively", and that some of them showed "symptoms of fever, vomiting and a back rash".

26 September The US National Research Council Committee on Methodological Improvements to the Department of Homeland Security's (DHS) Biological Agent Risk Analysis releases *Department of Homeland Security Bioterrorism Risk Assessment: A Call for Change*. The Committee convened in August 2006 [see 28-29 Aug 06] following a request by DHS for a review its Biological Threat Risk Assessment of 2006. It subsequently issued an interim report on its findings [see Jan]. The purpose of the report is to provide an independent, scientific peer review of the methodology used by the DHS in creating its Biological Threat Risk Assessment. It is intended that the current report will act as the foundation for future biennial updates. DHS is legally mandated every two years to produce such a review and to revise the formula as required. The Associated Press quotes DHS spokeswoman Amy Kudwa as saying that prior to the release of the report, Homeland Security officials had already revised the formula to include several of the recommendations. She adds, however, that other recommendations are contrary to what DHS and a number of other academics consider as being best practice.

26-28 September In the UK, there is a Wilton Park conference on *Chemical and Biological Weapons Proliferation*. Topics discussed are centred around: how developments in the life sciences impact on chemical and biological weapons proliferation; what the challenges posed by developments such as synthetic biology and nanotechnology are, and how they can best be addressed; how government, NGOs and public health entities stay ahead of the potential threat; how university research can be squared with non-proliferation and security obligations; and what the implications are of the blurring boundary between chemical and biological weapons.

27 September In Tsu, Japan, police are to charge Ishihara Sangyo Kaisha Ltd and two of its former officials with producing around 74 tons of phosgene in 2006 without reporting it to the Ministry of Economy, Trade and Industry, according

to unidentified "investigative sources" quoted by Kyodo news agency. According to Kyodo, it will be the first such prosecution for violation of the law, which requires companies to notify the Ministry of the quantity of phosgene they plan to produce for the year, 30 days before the amount exceeds 30 tons. [See also 22 Feb 07]

29 September In Moscow, following a summit between Russian President Dmitry Medvedev and South Korean President Lee Myung-bak, a joint statement is issued that says: "The two Presidents [...] agreed that relevant multilateral cooperation regimes should be strengthened in accordance with the [NPT], the [CWC], and the [BWC]."

30 September In the USA, researchers at the Centers for Disease Control and Prevention (CDC) have shown that a course of treatment using three doses of anthrax vaccine proves as effective in producing immunity in clinical testing as do four, so reports Reuters news agency. The study, which involved 1,005 patients receiving the vaccine over a period of six months, also found that injecting the vaccine into the muscle of the upper arm rather than under the skin reduced side effects. The researchers now plan to see whether there is any difference in the immune response between people who receive four vaccine doses over 3 1/2 years and those who receive eight. "Depending on the data at the end of the study, we have the potential to halve the doses that a person needs to get," says CDC researcher Conrad Quinn.

30 September The US National Research Council Committee to Review Secondary Waste Disposal and Regulatory Requirements for the Assembled Chemical Weapons Alternative Program releases *Review of Secondary Waste Disposal Planning for the Blue Grass and Pueblo Chemical Agent Destruction Pilot Plants*. The report states that although there are a number of benefits to offsite disposal, such as a shorter time for completion, "the offsite option may be unattractive for other reasons". Nevertheless, it concludes that transporting secondary waste off-site for final disposal is safe, provided certain safeguards are followed. The report, which was commissioned by the Army, states: "The experience to date with the offsite shipment and treatment of mustard and nerve agent hydrolysates from the Aberdeen and Newport [chemdemil] facilities indicates that offsite transportation and disposal of these materials is a safe and technically viable course of action." It therefore recommends that the Pueblo and Blue Grass Army facilities "consider such an option now, before the plants are built and operating, to maximize the benefit from such a change". Furthermore, the report says that the off-site shipment of other forms of "secondary" waste generated by the disposal sites should be considered as an option provided certain conditions are met.

30 September – 1 October In Vilnius, Lithuania, there is an *International Seminar on Sea-Dumped Chemical Weapons: Perspectives of International Cooperation*, which is organized and hosted by the Lithuanian Ministry of Foreign Affairs. Among the presentations made is one by John Hart of SIPRI and Thomas Stock of Dynasafe on the subject of 'Recent Scientific and Political Developments Regarding Sea-Dumped Chemical Weapons in the Baltic Sea'.

1 October Russia has now destroyed a total of 11,648 metric tons, or 29 per cent, of its stockpile of chemical weapons, so reports ITAR-TASS news agency, quoting Acting Head of the Federal Agency for Secure Storage and Elimination of Chemical Weapons Nikolai Khelebnikov [see also 18 Apr and 3 Jun]. Khelebnikov says that the Kambarka chemdemil

facility has now destroyed more than 96 per cent of its chemical weapons, while the Maradykovsky facility has destroyed nearly 64 per cent of its stockpile. Meanwhile, Deputy-Director of the Federal Industry Agency Viktor Kholstov says that the government has directed an extra \$125 million to chemdemil operations this year, to make up for money that did not arrive from other countries. "Despite all financing problems, thanks to immense effort of all involved ministries the federal program to eliminate chemical weapons in Russia received major support in the past two years and was recognized by the Russian government as one of the most successful goal-oriented programs under implementation," Kholstov says.

1 October In Stuttgart, Germany, the US Department of Defense launches a new combatant command for Africa, the remit of which includes preventing the trafficking of weapons of mass destruction and related materials. The US Africa Command, which brings to six the number of US geographic combatant commands, will coordinate US military relations with the 53 African nations. Its mission is to work "in concert with other US government agencies and international partners" to conduct "sustained security engagement through military-to-military programs, military-sponsored activities, and other military operations as directed to promote a stable and secure African environment in support of US foreign policy".

Discussing the new organization at a press conference some days later, the head of the Command, General William Ward, says that routes used to traffic WMD "are [the same] routes that criminals use; terrorists use; illegal traffickers of drugs, people, weapons use". Ward says the Command will provide support to the countries concerned as opposed to despatching US forces to undertake operations. "I see our role as ... assisting the Africans in reaching their capacity to, in fact, address those challenges: transiting of weapons of mass destruction, transiting of illegal weapons and other things that threaten stability within their borders." The Command, says Ward, will remain headquartered in Stuttgart "for now", but in the future it may be relocated to Africa.

1 October US Department of Health and Human Services (HHS) Secretary Mike Leavitt announces that postal workers could be offered advance supplies of antibiotics for themselves and their families in exchange for volunteering to distribute antibiotics following an anthrax attack. Leavitt says: "In an anthrax attack, time is of the essence in preventing illness and death by getting antibiotics to those who may have been exposed... By providing advance protection to letter carriers who volunteer to deliver antibiotics in an affected community, we can gain the benefits of the unique capabilities of the Postal Service to get much needed medicines to those who need it quickly. This is one part of our strategy to encourage preparedness at all levels of government to enable our nation to respond effectively in the event of an anthrax emergency." A HHS press release states that over the past several years, under the Cities Readiness Initiative (CRI), HHS and the Postal Service have successfully developed and tested in three cities – Seattle, Philadelphia and Boston – the ability of letter carriers to quickly deliver door-to-door quantities of antibiotics from the Strategic National Stockpile to residential addresses. The CRI, which dates back to 2004, is a federally funded effort to prepare 72 major US cities and metropolitan areas to effectively respond to a large scale bioterrorist event by dispensing antibiotics to their entire identified population within 48 hours of a decision to do so. Spokesman for the National Association of Letter Carriers Drew Von Bergen says the strategy has the full support of the Postal Service and its unions. Leavitt also says that he has issued a declaration under the Public Readiness and Emergency Preparedness Act, to establish

legal immunity for public and private officials who oversee the production or distribution of the anthrax vaccine by declaring a "public health emergency" owing to the risk of a bioterrorism attack. He says the emergency commenced two days previously and would run through 31 December 2015.

2 October At OPCW headquarters, it is the deadline for CWC parties to submit their declarations on projected activities and anticipated production in 2009 at Schedule 1 facilities. A Note by the Technical Secretariat states that the following parties have met the deadline: "Australia, Canada, China, Cuba ('nil' declaration), Czech Republic, Finland, France, India, Iran, Japan, South Korea, the Netherlands, Norway, Serbia ('nil' declaration), Singapore, South Africa, Spain, Switzerland, the UK and the USA.

2 October The US Department of Defense has launched a new website on chemical and biological testing conducted from the early 1940s through the mid-1970s, says Michael Kilpatrick, strategic communications director for the Military Health System in an interview on BlogTalkRadio.com. The purpose of the Chemical-Biological Warfare Exposures Site is "to provide Service members, veterans, their families and the public with information on what happened during CB testing conducted years ago that potentially affected the health of those who served". The information relates to "tests conducted by DoD that possibly resulted in CB exposures only".

3 October The US Department of Defense announces that it has assigned specialists from across the military to the first of three planned units dedicated to assisting local and state governments following a chemical, biological, radiological, nuclear or high-yield explosive attack. The CBRNE Consequence Management Response Force, which is a joint unit made up of personnel from various military agencies, would perform such functions as securing the site of an attack, assessing radiological contamination levels, performing decontamination and providing medical care. Creation of the unit was recommended by the 9-11 Commission [see 22 Jul 04]. In a statement, Assistant Defense Secretary Paul McHale says: "The stand-up of the first of three CBRNE Consequence Management Forces represents a force of 4,000 to 6,000 personnel that can be quickly tailored to support a coordinated national response to a specific CBRNE incident. This is a fundamental change in military culture and capability." The first response force, comprising 4,700 personnel, will be overseen by the US Northern Command's Joint Force Land Component Command, based in San Antonio, Texas. According to the *Washington Post*, the Department last year approved \$556 million in funds to establish the units by 2011. In total, the military intends to deploy 20,000 troops within the country to aid in the potential response to an act of WMD terrorism or other large-scale disaster.

Ten weeks later, Commander of the US Northern Command Air Force General Victor Renuart says the creation of the units is a response to the recognition that the USA does not have "a standing capability to respond to an attack by weapons of mass destruction". They will, he says, be able to deal with up to three simultaneous events involving release of chemical or biological agents or a nuclear or radioactive explosion. Renuart says the second unit will be created in the summer using personnel from the South Carolina National Guard, and though the third is planned, its location is yet to be determined.

3 October The US Department of Commerce announces that it has fined Nalco Co of Naperville, Illinois, \$115,000 for illegal export of triethanolamine to Angola, the Bahamas and the Dominican Republic in 13 shipments

between April 2003 and September 2006. Triethanolamine has many worthwhile applications in civil industry and commerce but is also a CW precursor listed in Schedule 3 of the CWC.

4 October The US Senate passes the \$600 billion *Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009*, which includes a requirement, proposed by Senator Barbara Mikulski (Democrat – Maryland), that the Army funds the National Academy of Sciences to conduct a study of the public health and safety concerns surrounding plans to expand the biodefence laboratories at the US Army Medical Research Institute of Infectious Diseases [see 8 Aug], the study to be completed by 1 March 2010.

6 October Taiwanese National Security Bureau Director Tsai Chao-ming says the SARS virus was a “biological warfare formula” developed by China and that his department would “continue to monitor the situation”. Speaking before the parliamentary Foreign and National Defense Committee, he says: “In the 2003 SARS period, there were deaths and injuries, and in addition China hid the patient count, causing panic in people’s hearts... At that time insider information indicated that SARS was a biological weapon.” In a speedy response to the accusation, Chinese Foreign Ministry spokesman Qin Gang says: “These are completely groundless and irresponsible comments... Could you help me find the original source so we can find the scoundrel who spread them?”

The next day, donning surgical masks and displaying banners on the legislative floor, Democratic Progressive Party legislators urge the government to disclose its intelligence and demand answers from China regarding the allegation. Meanwhile, the National Security Bureau issues the following statement: “Chao-ming expresses his sincere apology that his gaffe ... has caused misunderstanding and concerns.”

6 October The US Government Accountability Office transmits to Congress *Plan Colombia: Drug Reduction Goals Were Not Fully Met, but Security Has Improved; US Agencies Need More Detailed Plans for Reducing Assistance*. The purpose of the report is to examine US assistance to Colombia since funding for Plan Colombia was first approved by Congress [see 22 Aug 00]. The Colombian government announced the creation of Plan Colombia – a 6-year strategy – in October 1999 in order to reduce the cultivation, processing, and distribution of illicit narcotics in Colombia by fifty per cent over a six-year period, and to improve the security climate in Colombia by reclaiming control of areas held by a number of illegal armed groups that had previously been used to finance the groups’ activities largely through the drugs trade. One of the recommendations of the report is that “the Secretary of State, in conjunction with the Secretary of Defense, Attorney General, and Administrator of [the US Agency for International Development], and in coordination with the government of Colombia, develop an integrated nationalization plan that details plans for turning over operational and funding responsibilities for US-supported programs to Colombia”. This plan “should define US roles and responsibilities for all US-supported military and non-military programs.”

6 October In the USA, the Vietnam Agent Orange/Dioxin Victims’ Association (VAVA) submits a petition to the Supreme Court to request a review of the Court of Appeal’s decision to reject a claim by the victims of Agent Orange against a number of US companies [see 22 Feb]. Announcing the move at a press conference in Hanoi, Vietnam, VAVA Deputy President and General Secretary Tran Xuan Thu says that if the petition is accepted, VAVA may then lodge an appeal

with the Supreme Court. Lawyer and member of the Executive Board of VAVA Luu Van Dat says that if the US Supreme Court rejects the petition, it will still be possible to continue the lawsuit at courts in eleven other US states as the Supreme Court’s decision only applies to the state where the petition is submitted. According to the Vietnam News Agency (VNA), the 41-page petition states, amongst other things, that the verdicts reached by the Court of Appeal were contentious in that they did not recognize the impact of herbicides sprayed by the US forces during the Vietnam War, when it ruled that the adverse effect they had on the human population was an unintended consequence of their use.

6-9 October In Malacca, Malaysia, there is a technical training course at the Royal Malaysian Customs Academy on the CWC transfers regime for customs officials of Southeast Asian national authorities. The course – which is jointly organized by the Malaysian government and the OPCW, with a voluntary financial contribution from South Korea – provides information on the CWC and the transfers regime with a view to enhancing the capacities of CWC parties to effectively track the import and export of scheduled chemicals. In total, twenty-two participants from eight CWC parties – Cambodia, Indonesia, Malaysia, Palau, Philippines, Sri Lanka, Thailand, and Viet Nam – attend the course. There are also two participants from Myanmar, a non-party.

7 October In Washington DC, addressing the Maritime Security Council 2008 Leadership Summit, Department of Homeland Security Under-Secretary Charles Allen says: “While we currently assess that al Qa’ida lacks a WMD capability, it is equally clear that they intend to obtain this capability and would not hesitate to employ such a device should they obtain one. Since terrorists lack a missile delivery capability for such weapons, our concern is their use of the supply chain [through US ports and harbours] to deliver a device directly and employ it in a major city.

9 October The UK government releases its response to the House of Commons Select Committee on Innovation, Universities, Science and Skills report on biosecurity in UK research laboratories [see 25 Jun]. Regarding the Committee’s support of the conclusions reached by Sir Bill Callaghan, which recommended that there should be a single regulatory framework with the Health and Safety Executive (HSE) as the regulatory body [see 13 Dec 07], the response states: “The Government is continuing to implement the Callaghan recommendations. The HSE is now leading the final phase of work to introduce a single regulatory framework, in liaison with DEFRA [the Department of the Environment, Food and Rural Affairs] and other relevant government departments, the devolved administrations and interested parties.”

9 October The US Department of Defense issues a directive on *Roles and Responsibilities Associated with the Chemical and Biological Defense Program*. The directive updates a previous directive on policy, roles, and responsibilities for research, development, and acquisition (RDA) activities associated with the Program. It also updates and assigns responsibilities and functions associated with RDA of chemical, biological, and radiological defence materiel required to support combating WMD missions. Specifically, the Program “develops and acquires a family of integrated and interoperable chemical, biological and radiological defence capabilities that protect and enable military forces to operate successfully in chemical, biological and radiological environments”.

10 October In the USA, CNN runs an interview with Rafid Ahmed Alwan, the Iraqi defector codenamed 'Curveball', whose accounts former US Secretary of State Colin Powell relied on when he presented evidence of Iraqi mobile biological weapons laboratories to the UN Security Council [see 5 Feb 03]. Alwan says: "I never told anyone Saddam Hussein was producing weapons of mass destruction... It is not true that I am the only person who said things about Iraq... There are so many other people who gave information as well." He adds: "I feel that America offered to Iraq what no other country can offer to Iraq... America sacrificed its people and its money and its position to free a dictatorial country." [See also 18 Jun]

12 October *USA Today* reports that although the emergency services have responded to more than 30,000 false alarms involving powders and other substances since the anthrax letter attacks [see 15 Oct 01], none of the incidents have actually involved anthrax or other lethal agent. Federal Bureau of Investigations spokesman Richard Kolko says that since January 2007, the FBI investigated more than 900 potential biological-weapon cases, "the majority of those being white powder letters." He notes that "several dozen people" have been found guilty of violating federal hoax and domestic terrorism regulations. Spokesman for the Postal Inspection Service Douglas Bem says that a significant portion of the 2,893 incidents that the Service has responded to in the last year have involved white powder, but no official tally of powder scares since 2001 is available.

13 October In Strasbourg, France, police have opened an inquiry into the possibility that a Russian human rights lawyer, who works at European Court of Human Rights, may have been poisoned after a substance similar to mercury was found in her car. Karina Moskalenko, whose clients include the family of the murdered journalist Anna Politkovskaya [see 18 Jun], was treated together with members of her family for nausea and headaches after first coming across the substance the previous day.

Two days later, the Associated Press quotes an unidentified "police official" as confirming the discovery of pellets of mercury in Moskalenko's car. The official says that although by the time laboratory analyses of the pellets were performed the mercury was not potent enough to cause injury or death, the mercury level could have been higher at the time they were recovered by police. Speaking to the Associated Press, Moskalenko says: "Somebody put it there, but I don't know who could have done it or what aims they were pursuing."

14 October In Liberec, Czech Republic, Czech military deputy chief of staff Josef Proks says that terrorist attacks involving chemical and biological weapons are a much greater threat to the Czech Republic and the world than a nuclear war. Speaking to CTK news agency during a conference on WMD countermeasures, in which experts from sixteen countries are participating, Proks says: "A large military conflict in Europe is not [expected], but we must not slacken our effort in educating specialists in protection against mass destruction weapons and in technological development."

14-17 October At OPCW headquarters, the Executive Council convenes for its fifty-fourth [see 24-27 Jun] session. Chaired the meeting on this occasion is Ambassador Oksana Tomová of Slovakia.

The Council considers and approves amendments to the agreed detailed plan for verification of the destruction of chemical weapons at the US Recovered Chemical Weapons

Destruction Facility. It considers and approves the agreed detailed plan for verification of the destruction of the Category 1 chemical weapons at the Shchuchye chemdemil facility (CWDF), Russia, and at the Ruwagha Chemicals Reloading System and Rabta Toxic Chemicals Destruction Facility, Libya.

The Council approves the required corrections to the detailed plans for conversion of the Rabta Pharmaceutical Factory 1 and Rabta Pharmaceutical Factory 2 CWPFs, Libya, having noted at its previous session a Note by the Secretariat on the matter. It also notes a Note by Director-General Rogelio Pfrirer on the status of completion of conversion of CWPFs.

The Council notes a Note by the Director-General on the progress made by those CWC parties that have been granted extensions of deadlines for the destruction of their Category 1 chemical weapons.

Further to a decision by the Conference at its eleventh session [see 5-8 Dec 06], the Council considers and notes national papers by an unnamed state party entitled "Report on CW Destruction Activities during the Extension Period" and "Report on the Completion of Destruction of Chemical Weapons Stockpile"; by Libya entitled "Report on the Progress of Destruction of Category 1 and 2 Chemical Weapon Stockpile, Fifth Report"; by India entitled "Report on CW Destruction Activities During the Extension Period after 29 April 2007, 90-day Report (5th)"; by the USA entitled "Report to the Executive Council: Destruction Activity as of 30 June 2008, Fifth Report"; and by Russia entitled "Report on CW Destruction Activity at the End of the Current 90 Day Period after 29 April 2007 (as at 30 June 2008)". Further to a decision by the Council at its forty-sixth session [see 4-7 Jul 06], the Council considers and notes a national paper by China entitled "Report on the Status of the Chemical Weapons Abandoned by Japan in China". The Council also considers and notes a national paper by Japan entitled "The Report of the Current Status of the ACW Projects in China (Reporting Period: from 1 April to 30 June 2008)".

The Council considers and notes the report of the visit by the Chairperson of the Executive Council and representatives of the Executive Council to the Shchuchye CWDF, Russia, from 8 – 11 September 2008.

Further to a decision by the Conference at its twelfth session regarding the implementation of Article VII obligations [see 5-9 Nov 07], the Council notes a Note by the Director-General on the status of implementation of Article VII as at 15 September 2008 [see also 19 May], and submits the report to the Conference for consideration at its thirteenth session. The Council notes a report by the Director-General on the status of implementation of Article X of the CWC as at 31 July 2008.

The Council notes a proposal by Cuba to convene a workshop to explore ways and means for the full implementation of Article XI, and encourages further deliberations in order to finalize the elaboration of all its aspects, with a view to holding such a workshop in 2009.

The Council considers and notes the annual report on the implementation of the action plan for the universality of the CWC during the period from 3 September 2007 to 25 September 2008.

The Council considers and approves a facility agreement with Russia regarding on-site inspections at the Shchuchye CWDF and with Libya regarding on-site inspections at the Ruwagha Chemicals Reloading System and Rabta Toxic Chemicals Destruction Facility.

The Council considers a Note by the Director-General on revisions to the specifications for two items of approved inspection equipment, and approves the revisions proposed.

The Council notes a Note by the Director-General on the

update on the Technical Secretariat's readiness to conduct a challenge inspection. It recalls the importance of resolving outstanding issues related to challenge inspections, and requests CWC parties to resume intersessional consultations on these issues.

The Council considers a Note by the Director-General on the list of approved data recommended for removal from the OPCW Central Analytical Database and approves a draft decision on the removal.

Further to its consideration of this issue at its previous sessions, the Council notes the report of the eleventh session of the Scientific Advisory Board.

In his address to the Council, US Ambassador to the OPCW Eric M Javits says: "Since our last meeting, quietly and without the public recognition it rightly deserves, a State Party completed the destruction of its entire chemical weapons stockpile becoming the second State Party to do so, and before its deadline [see 10 Jul]. We extend our warmest congratulations and deep appreciation for a job well done. With this accomplishment, we were brought one step closer to achieving a world without chemical weapons." [See also 11 Jul 07]

15 October In South Korea, Suwon District Court sentences a North Korean woman to five years imprisonment for a series of offences, including plotting to assassinate South Korean intelligence agents with poisoned needles. Won Jeong Hwa, who was arrested three months previously, pleaded guilty to seducing military officers in exchange for classified information on the location of important military installations. Passing sentence, the judge cites her confession, cooperation with investigators and expressions of remorse as factors that avoided her potentially being sentenced to life imprisonment.

16 October The Belgian *De Standaard* reports an informer who has worked for the Belgian Secret Service since 2000 as confessing to Moroccan police that at a meeting in Afghanistan in 2000 the then third-in-command of Al-Qaeda, Mohammed Atef, asked him "to seek specialists in Belgium able to help him make chemical and biological weapons". *De Standaard* says it has seen the confessions Abdelkader Belliraj – who, together with thirty-two suspected accomplices, is about to be tried in Rabat, Morocco, for plotting against the Moroccan government. The confessions made to Moroccan police related to a number of killings and his visits to Al-Qaeda leaders in Afghanistan.

16 October US Congressman Rush Holt [see 24 Sep] writes to the National Academy of Sciences expressing concern that the questions relating to the Ivins case that the FBI had asked the Academy to study [see 16-17 Sep] are "narrowly focused and do not truly test the FBI's conclusions in the case". Others have voiced similar concerns. He requests the Academy, if it elects to undertake that study, to answer several additional questions. These, in the words of his letter, are as follows:

- Are any of the FBI's scientific findings inconsistent with the FBI's conclusions?
- Are there any scientific tests that the FBI has not done that might refute their conclusions?
- Did the FBI follow all accepted evidence-gathering, chain of possession, and scientific analytical methods? Is it possible that any failure to do so could have affected the FBI's conclusions?
- Is it scientifically possible to exclude multiple actors or accessories?
- How likely is it that a single scientist working alone could complete the postulated actions? What would be the

required time and equipment needed?

- Regarding the FBI's question #2, is it scientifically possible to determine the stability of the combination of mutations in the RMR-1029 strain? Is it scientifically possible to determine how long this combination was in the flask in Dr. Ivins' custody? Is it scientifically possible to distinguish a sample taken from Dr. Ivins' flask from one taken from one of its daughter flasks in another lab? How many passages or how long is this mutation combination likely to remain?
- Is it scientifically possible to rule out the possibility that there are other stocks (including daughters of Dr. Ivins' flask) that share the RMR-1029's mutation combination for which the FBI has not accounted?
- Regarding the FBI's question #5, are the FBI's explanations for the presence of silicon in the spores recovered from the mailed letters [*sic*]?
- If the spores for the attacks were grown in Dr. Ivins' lab as the FBI has postulated, are there scientifically credible reasons for the FBI's inability to produce spores with the identical signatures of those used in the attacks if they used the same stocks, media, and conditions that were present in Dr. Ivins' lab?
- Given the revelations of the extreme ease of environmental contamination noted by the FBI's Dr. Douglas Beecher in his August 2006 article in *Applied and Environmental Microbiology*, how likely is it that no environmental contamination would be found in the vehicle, house, or personal effects of the accused?
- In summary, has the FBI taken every opportunity to invalidate components of their hypothesis rather than pursuing reasoning and collection of evidence intended to confirm their hypothesis?
- If not, what challenges have been made to the FBI investigation's reasoning? Could any of those challenges be undertaken still, or has the passage of time or loss of evidence made that impossible? It would be most useful if any panel you convene were to answer scientific or technical questions that may refute the FBI's conclusions.

The Academy later tells reporters that the FBI letter was being used as the basis of a statement of task and that the Holt letter would be "taken into consideration" in writing up an "appropriate charge" for approval by the NAS governing board. The Academy spokesman says that the people nominated to the investigating committee "won't be scientists who have been working on this for the FBI" and would be "experts from a variety of disciplines".

17 October At the 63rd UN General Assembly in New York City, the First Committee (Disarmament and International Security) at its 12th meeting conducts its thematic debate on weapons of mass destruction other than nuclear weapons. There are statements by the chairman of the 2008 BWC Meeting of States Parties, by France on behalf of the European Union, by the chair of the Panel of Governmental Experts on the issue of missiles in all its aspects, by Indonesia on behalf of the Non Aligned Movement, by Brazil on behalf of the Southern Common Market (MERCOSUR) and by Norway, Lithuania, Belarus, Australia, Cuba, South Korea and Hungary.

Regarding the CWC, the EU statement observed that its general purpose criterion was one of the key guarantees that the Convention would retain its relevance for dealing with future issues. The MERCOSUR statement made no explicit reference to the criterion but called for renewed efforts and greater interaction among states parties towards implementation, with a view to strengthening the mechanisms that increased the collaboration of developed countries to create and promote national measures and compliance with the

Convention's obligations. The NAM statement emphasized the importance of international cooperation in the field of chemical activities for purposes not prohibited under the CWC. The Australian statement observed that the CWC was crucial to efforts to halt the proliferation of chemical weapons, and regretted that the CWC Second Review Conference [see 18 Apr] had experienced a difficult negotiating environment, which had prevented constructive discussion of many of the challenges facing the treaty and, thus, agreement by states parties on how to deal with them. It was now vital, so the Australian statement continued, that all states parties looked to the future to ensure that the Convention adapted to developments in science and technology: "We must continue to strive for the full and effective implementation of declaration and inspection requirements to activities not prohibited by the Convention."

Regarding the BWC, the EU statement reiterated Union commitment to the long-term development of measures to check compliance with the Convention. The NAM statement attached importance to strengthening the Convention through multilateral negotiations for a legally binding protocol and universal adherence to it. Cuba associated itself with the NAM statement and advocated negotiation and adopting a legally binding protocol effective against the production, storage, transfer and use of biological weapons.

19-23 October In Qatar, there is a basic training course for personnel of national authorities in Asia involved in the national implementation of the CWC, in which representatives of 26 national authorities are participating. The purpose of the course, which is jointly organized by the Qatari government and the OPCW, is to increase national capacities of CWC parties in the region with a view to fulfilling the objectives set out in the Article VII action plan [see 20-24 Oct 03]. The Qatari government has provided a voluntary contribution to support the hosting of the course.

20 October In Cavtat, Croatia, the ninth international conference on the control of the export of military and dual-purpose goods takes place. The event is jointly organized by the governments of Croatia and the USA, and is sponsored by the US Export Control and Related Border Security programme. Attending the conference are around 200 senior officials, experts and representatives of 65 countries, as well as representatives of a number of non-governmental organizations. Discussions take place on subjects such as global trends, challenges in the control of exported goods, and border security.

20 October In the USA, three financial institutions in eleven states receive threatening letters containing an unidentified powder. Over the next three days, more than 60 letters – posted from Amarillo, Texas – are received by Chase Bank, the Federal Deposit Insurance Corporation (FDIC), and the US Office of Thrift Supervision. The Federal Bureau of Investigations subsequently publishes photographs of one of the letters, which states: "Steal tens of thousands of people's money and not expect repercussions... It's payback time. What you just breathed in will kill you within 10 days. Thank (name redacted) and the FDIC for your demise." The FBI does not identify the person whose name was deleted. The Associated Press, however, quotes a "US official" speaking on condition of anonymity as saying the name relates to a person who may have played a role in the recent financial crisis, though not a government official. An unnamed FBI spokesman says that the letters sent to Oklahoma were filled with calcium [*sic*]. [See also 12 Oct]

Three months later, the FBI announces that Richard Leon

Goyette has been arrested and charged with knowingly and intentionally conveying false and misleading information. According to prosecutors, Goyette claims his shares in Washington Mutual lost \$63,525 in value in September 2008 when the bank was put into the receivership of the FDIC.

21 October The Chinese Ministry of Public Security publishes the identities of eight alleged terrorists belonging to the East Turkistan Islamic Movement (ETIM), including that of Emeti Yakuf who, amongst other things, had previously issued a video recording that included threats to use chemical and biological weapons during the 2008 Beijing Olympics.

21 October Eritrean government forces killed 26 Kunama-ethnic civilians last year using "zed poison", according to a former member of the Eritrean intelligence service. Mengsteab Girmay says: "26 Eritrean Kunama prisoners were poisoned together in a single day in April 2007 as government agents packed them into 2 containers, each containing 20 liters of fatal chemical, zed poison... The massacre was carried out by selected 6 loyal military leaders under the order of major Teklebirhan Hagos, near a prison site of 'Maydima'... The victims were first told to dig 4-by-4 hole with 5 meters depth for toilet purposes which unfortunately they were digging their own burial grave without their knowledge." The *Sudan Tribune* quotes Mengsteab as saying the objectives of his unit were to follow up, control and foil any conspiracy by external or internal dissidents against military and governmental institutions. The victims, he says, were executed after being forced to confess to planting anti-vehicle mines in Shambako, Geze, Erab, Bim-bilna, Sinshale, and Adi Teklehimanot at the beginning of 2001.

22 October In Madrid, there is a roundtable on the use of chemical weapons by the Spanish army during its occupation of northern Morocco between 1921 and 1927. Among those speaking is Spanish historian Maria Rosa de Madariaga. The event is sponsored by the Madrid-based Group Nekkro, which according to Morocco News is a "intercultural group". [See also 26 Jul 05]

22 October In Maryland, there is a ceremony to mark the opening of the National the Biodefense Analysis and Countermeasures Center [see 26 Jun 06]. The Center includes a BSL-3 laboratory, a BSL-4 laboratory, and a Biothreat Characterization Center, which will model potential bioterrorism scenarios and help produce drugs to counter biological agents. Though it comes under the remit of the Department of Homeland Security (DHS), some of its laboratories will be run by the Army and the National Institutes of Health. In total, nearly 140 scientists will work at the Center, which cost \$143 million to build. It is scheduled to begin full operations in March 2009. In his speech, DHS Under-Secretary Jay M Cohen says the Center is "an incredible demonstration of what we can do when we're challenged, when we're threatened".

22 October In the USA, the Center for Strategic and International Studies releases a draft report on *Iranian Weapons of Mass Destruction: Capabilities, Developments, and Strategic Uncertainties (Chemical Weapons Programs)*. In the report, Anthony Cordesman writes: "Iran's technology base is advanced enough [...] so that Iran retains some capability to make chemical weapons, and it may have inactive or mothballed facilities. While there have been no public reports of active production, this is possible and such efforts can occur at low levels and be easy to conceal... An Iranian missile force known to be armed with chemical warheads – even less effective unitary warheads – would give Iran a rapid way of deploying a form of weapon of mass destruction that would

almost certainly have a major impact on how its neighbors view the risk of supporting US military action and might have a deterrent impact on Israel.” Cordesman adds that although US intelligence officials and other sources continue to assert the existence of an active Iranian chemical weapons programme, “Iran’s current status as a chemical weapons power is simply impossible to determine”.

Six days later, the Center releases another draft report, this time on *Iranian Weapons of Mass Destruction: Biological Weapons Programs*. In it Cordesman writes: “The world market in biotechnology, food processing, pharmaceutical, and other related equipment has grown so large, has so many dual-use items, and has such weak controls, that it is impossible to know what Iran has purchased and is purchasing, and from whom they are purchasing such items... What is clear is that Iran has become a country with a relatively advanced base in biotechnology, which has extensive laboratory and research capability, and steadily improving industrial facilities with dual-use production capabilities with all of the equipment necessary to produce wet and dry storable biological weapons.” The report concludes that although the spread of biological weapon agents is often unpredictable, Iran “should be able to deploy weapons with at least the lethality that militarized anthrax had reached during the Cold War”. [See also 22 Aug]

23 October At United Nations headquarters in New York City during the 63rd session of the UN General Assembly, a template for the projected Biological Incident Database, which is a new product of the UN Global Counter-Terrorism Strategy Plan of Action [see 8 Sep 06], is presented to interested UN delegations and civil-society representatives at a meeting convened jointly in the margins of the First Committee by the UN Office for Disarmament Affairs (UNODA) and the NGO Committee on Disarmament. The presentation and background documentation are later made available in *UNODA Occasional Paper* no 15.

23 October The US Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices recommends that state and local public health officials should consider administering anthrax vaccines to first responders where there exists only a “low” threat of an anthrax attack. Previously, the committee had issued guidance recommending against immunizing first responders as a matter of course, as “the risk of exposure cannot be calculated [see 15 Nov 02]”. Announcing its revised recommendations during a two-day meeting in Atlanta, the committee emphasizes, however, that immunization of first responders should not be made mandatory. In a statement, CDC spokesman Curtis Allen says: “[The] committee recognized that while the risk of exposure for first responders to anthrax is low it may not be zero... Therefore, first responder units may choose to offer their workers pre-event vaccination on a voluntary basis. The vaccination program should be carried out under the direction of a comprehensive occupational health and safety program.”

25 October From Lebanon, in an interview on Al-Manar television, Hezbollah Secretary-General Sayyid Hasan Nasrallah dismisses recent reports in the Arabic press that he was poisoned as being part of a psychological war against the resistance.

27 October In the UK House of Commons, responding to a written question on the Warhead Pre-Concept Working Group, including whether the Group “has considered options for agent defeat”, Secretary of State for Defence John Hutton says; “[A] review, which was previously overseen by the

Warhead Pre-Concept Working Group is now being co-ordinated by the Atomic Weapons Establishment within their systems engineering management structure under the direction of the Ministry of Defence. It is examining both the optimum life of the UK’s existing nuclear warhead stockpile and the range of replacement options that might be available to inform decisions on whether and how we may need to refurbish or replace the existing warhead likely to be necessary in the next Parliament. Some of the work included in this review is being undertaken in co-operation with the US and with the assistance of US personnel under the 1958 UK-US Agreement for Co-operation on the Uses of Atomic Energy for Mutual Defence Purposes.”

27-29 October In Amman, Jordan, there is an international forum on *Confronting Biological Threats: Biosecurity, Biological Weapons Nonproliferation, and Regional Cooperative Mechanisms* at the Arab Institute for Security Studies, co-sponsored by VERTIC. The event brings together experts from government, inter-governmental organizations, academic institutions, civil society and the private sector. In her address on day one, US Assistant Secretary for Verification, Compliance and Implementation Paula A DeSutter says: “Determining if another party is cheating is a national responsibility. Even in such organizations as the IAEA, it is the States party that reach noncompliance judgments acting as the board of governors. Thus our nations have a responsibility to ensure that others also live up to their treaty commitments. This doesn’t demand fancy satellites. It does require vigilance. The US determined that a verification protocol would not solve the verification challenges. Visits to facilities are not likely to be able to provide evidence of noncompliance. But, the visited Party may be violating. Thus false confidence would be created, and we would not pursue other, perhaps better, means to address these problems. I am very encouraged by the intercessional [*sic*] work under the BWC, the VERTIC efforts and by efforts such as this conference to address these issues.”

28 October In Moscow, OPCW Director of Special Projects Krzysztof Patulej says that “as of now Russia has scrapped 11,600 metric tons of poisonous substances of the first grade, which amounts to 30 percent of the stock”. Speaking during the Russian Green Cross annual public forum, he adds that “the rates of chemical disarmament in Russia are the highest among other states”.

The next day, Interfax news agency quotes an unidentified OPCW spokesman as saying that the exact Russian destruction figure for Schedule 1 chemicals is 29.7 per cent. According to Interfax, Russia plans to spend more than \$4.7 billion on chemdemil operations from 2009 to 2011. [See also 1 Oct]

28 October The London *Daily Telegraph* reports that the Ministry of Defence plans, by April 2010, to cut one in five jobs at the Defence Intelligence Staff (DIS) – its military intelligence agency, which amongst other things, provides analysis on the proliferation of WMD – and to reduce its budget by around £7 million through a process of “streamlining”. The details are contained in a document “seen” by the *Telegraph* – dated 17 July 2008 and marked “restricted” – in which Chief of Defence Intelligence at the Ministry of Defence Stuart Peach warns that the “streamlining” could have serious consequences for the UK’s ability to anticipate and react to future security threats. The document states: “Implementation of streamlining risks disrupting the DIS’ ability to provide strategic warning of security threats to the UK and UK interests worldwide and, specifically, where UK military forces might be employed...”

Threats may not be foreseen, or not identified in a timely manner, by analytical teams thinned through Streamlining... Analytical effort will be reduced on Russian land and air force capabilities and activities."

28 October The US Department of Justice announces that during FY 2008, 145 entities have been prosecuted for smuggling military and dual-use technology abroad under the National Export Enforcement Initiative, compared with 110 prosecutions in FY 2007. In a press statement, Assistant Attorney-General Patrick Rowan says: "Through this multiagency initiative we are making America a far more hostile target for those that seek to obtain our sensitive technology through illegal means." According to the Department, 43 per cent of the cases involved illegal exports to China or Iran, both of which have sought to acquire US missile technology. An accompanying fact sheet, setting out the various violations, states that Iran had sought "chemical purchasing software" during the period in question. It states: "On July 25, 2008, Ali Amirnazmi, the owner of Trantech Consultants, Inc., in Pennsylvania, was indicted in the Eastern District of Pennsylvania, for acting as an unregistered agent of the Iranian government, violating US sanctions against Iran, and for lying to federal agents. For more than a decade, Amirnazmi allegedly sold software designed to help international entities identify the best prices for various chemicals produced by a number of Iranian companies that were owned, either in part or in whole, by the Iranian government. This investigation was conducted by the FBI and IRS.

28 October In Washington DC, in a speech at the Carnegie Endowment for International Peace, Defense Secretary Robert M Gates says: "[T]he United States will hold any state, terrorist group or other nonstate actor or individual fully accountable for supporting or enabling terrorist efforts to obtain or use weapons of mass destruction – whether by facilitating, financing or providing expertise or safe haven for such efforts."

29 October The US Department of Homeland Security has not yet completed the 'net assessment' of the country's preparedness for bioterrorism that the White House had asked for in 2006, so reports Judith Miller in a long article for the New York *City-Journal*. The Department had commissioned studies of what, as she puts it, "Americans had received for the billions of dollars spent on preparing for a bioterrorist attack since 2001". Many of the resulting papers had been submitted, but the assessment itself was now likely to be handed on to the next administration.

29 October In the USA, Trust for America's Health releases *Germs Go Global: Why Emerging Infectious Diseases are a Threat to America*. The report examines the range of emerging infectious diseases and why they are considered potential threats. It reviews the surveillance, diagnostics, vaccines, and therapeutics available, or which will be available, to counter such diseases, and offers a number of recommendations to better protect the USA. Amongst other things, it finds that the USA's defences against emerging infectious diseases are insufficient, thus creating serious consequences for its health system, economy, and national security. [See also 30 Apr]

29 October In California, the Federal Bureau of Investigations arrests a man for allegedly being behind the posting of letters containing packets of sugar marked "Anthrax Sample" and displaying a biohazard symbol. The letters are accompanied by CD copies of Marc Kyser's book "Anthrax: Shock and Awe Terror", which notes on the cover that "America has never been in such graver danger". Keyser is charged with three federal counts of sending a hoax letter. The Associated Press quotes FBI Special Agent Steve Dupre as saying Keyser had mailed more than 120 of the packages to US Representative George Radanovich, amongst others. None of the packages examined, however, have contained hazardous materials. Dupre says the case does not appear to be related to the recent hoax letters sent to financial institutions [see 20 Oct]. Two days later, a judge orders Keyser to be released on bail.

Two weeks later, a grand jury indicts Keyser on 10 counts of hoax mailings and three counts of mailing threatening communications, which carry a combined total of a maximum of 70 years imprisonment. Speaking to *The Sacramento Bee*, Keyser admits sending the packages, but says: "Nothing was meant to happen... It was a warning of the dangers we face."

29 October In Hawaii, the US Army and the University of Hawaii Undersea Research Laboratory will shortly undertake surveys of the state of chemical munitions that were dumped at depths of between 1,200 and 10,000 feet off the south coast of Oahu island following the end of the Second World War, according to Army's deputy assistant secretary for the environment. Tad Davis says: "This is the most comprehensive effort that's ever been undertaken to address this issue." The surveys will be conducted in January or February 2009 using the University's submersibles Pisces IV and Pisces V and a remotely-operated vehicle, which will examine some of the munitions and gather data, including water and sediment samples, with a view to determining the state of the munitions. The team will also test underwater robots for removing conventional bombs lying in shallow waters off Waianae Island. The *Honolulu Advertiser*, referring to a report last year to Congress, states that 2,558 tons of chemical agents were dumped at three sites off Oahu, including lewisite, mustard, cyanogen chloride and cyanide. Included in were 15,000 M70 115-pound mustard bombs, 1,100 M79 1,000-pound cyanogen chloride bombs and 20 M79 1,000-pound cyanide rounds. [See also 17 Mar 05 and 24 May 07]

30 October In Nashville, Tennessee, during an address to intelligence professionals, Director of National Intelligence Michael McConnell says that, amid an unprecedented transfer of wealth and power from West to East in the years leading up to 2025, there will be "an increased potential for conflict", including increased chances for "large casualty terrorist attacks using chemical, biological, or less likely, nuclear materials".

This Chronology was compiled by Nicholas Dragffy from information supplied through HSP's network of correspondents and literature scanners.

Forthcoming Events

8-10 June

Wiston House, Sussex, UK
Wilton Park Conference *Global Pandemic Response: Improving International Coordination*
details: www.wiltonpark.org.uk

tion Obligations: The OPCW as an Example of Effective Assistance in National Implementation of the CWC.
details: www.opcw.org

24-28 August

Geneva, Switzerland
BWC Meeting of Experts 2009

22-23 June

Jahorina, Bosnia and Herzegovina
International Seminar on National Implementation of Non-Prolifera-

14-17 July

OPCW Headquarters, The Hague
57th Session of the OPCW Executive Council

28-30 October

The Hague, Netherlands
CBRNe Convergence Conference
details: www.cbrneworld.com/cbrne_convergence_2009.html

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The *CBW Conventions Bulletin* (formerly the *Chemical Weapons Convention Bulletin*) (ISSN 1060-8095) is edited and published quarterly by the Harvard Sussex Program on Chemical and Biological Weapons (HSP). The goal is to provide information and analysis towards an effective multilateral treaty regime which will eliminate chemical and biological weapons and help prevent the exploitation of biomedical technologies for hostile purposes. HSP is chiefly supported by the John D and Catherine T MacArthur Foundation and the Carnegie Corporation of New York.

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